

Description

This invention relates to an infant rocker and has been devised particularly though not solely as a support for a device such as a bassinet.

It is desirable to provide a device which will enable an infant's cradle or bassinet or similar device to be supported and moved rhythmically in a suitable motion to pacify the infant. Various bassinets or cradles have been provided in the past which will enable the infant to be rocked by hand but this has always required the presence of a person such as the mother to rock the infant and which does not permit the mother to do other jobs while rocking the infant and keeping the infant placated. Other mechanised devices have been devised which rock or oscillate the infant in various manners but which are often complicated and therefore expensive to manufacture and are not always effective in pacifying the infant.

US-A-3874011 discloses an article of children's or infants furniture, such as a cot, which comprises a base and a cradle-portion which rests on the base by means of resilient elements. A motor drives a cam which bears against the cradle-portion to cause the cradle-portion to execute resilient jogging movement or oscillatory movement.

It is therefore an object of the present invention to provide an infant rocker which will obviate or minimize the foregoing disadvantages in a simple yet effective manner.

According to the invention, there is provided an infant rocker comprising a base, infant support means mounted on the base by suspension means which allow a predetermined degree of movement between the base and the support means and drive means arranged to move the support means rhythmically relative to the base characterised in that the drive means is arranged to move the support means in an orbital motion pattern in a plane substantially parallel to the base.

The drive means preferably incorporates a low speed electric motor and preferably either a cam type or crank type drive mechanism. The suspension means may be springs, preferably conical springs, extending between the base and the support means.

The support means may incorporate a flat support surface adapted to receive and support an infant container such as a bassinet. In a preferred form, the infant support means comprise a one piece plastics moulding in which the flat support surface comprises a central flat tray area adapted to receive and support a bassinet or the like, and in which a peripheral flange is provided extending upwardly from the bassinet support surface and then outwardly and downwardly in a skirt portion around the periphery of the infant rocker.

Notwithstanding any other forms that may fall within its scope one preferred form of the invention will now be described by way of example

only with reference to the accompanying drawings in which:

Fig. 1 is a plan view of an infant rocker according to the invention,

Fig. 2 is a cross-sectional elevation on the line 2-2 of Fig. 1,

Fig. 3 is a cross-sectional elevation to an enlarged scale on the line 3-3 of Fig. 1, showing the suspension between the base and the support means of the infant rocker.

In the preferred form of the invention an infant rocker particularly suitable for supporting a bassinet or the like is constructed as follows although it will be appreciated that the invention may also be applied in different forms to the support of other infant apparatus such as cots.

In the preferred form of the invention the infant rocker is provided with a base 1 having feet 2 which may be for example rubber mounting pads which enable the base to be placed on and supported by a flat surface such as a floor or table top.

The rocker is provided with infant support means in the form of a tray 3 which may for example be moulded in one piece from plastics material and which has a central recessed portion 4 surrounded by an upstanding lip 5 forming a support surface and edge restraint for a bassinet. The tray is sized so that a typical bassinet may be placed in the recessed tray portion 4 and held in place by the raised lip or flange 5 surrounding the tray portion. The flange 5 is provided with a downwardly depending skirt 6 coming close to the support surface level so as to enclose the base of the infant rocker.

The infant support means 3 is mounted on the base by suspension means which may for example be in the form of conical springs 7 extending upwardly from the base at point 8 (Fig. 3) to the underside of the tray at a convenient point for example at point 9 on the underside of the lip 5. Either end of the spring may be fastened to the base and to the underside of the tray respectively (for example, by way of clips) and there may be as many springs provided as are necessary to evenly support the weight of the infant support means and of a bassinet containing an infant placed in the tray 4. For example four such conical springs may be provided located at each corner of the tray 4. The conical springs form suspension means for the infant support means which allow the support means to move substantially in a plane parallel to the base in an orbital motion.

The infant rocker is further provided with drive means in the form of an electric motor 10 which is conveniently mounted on the base 1 and has an upwardly protruding drive shaft which is connected to a drive mechanism 11. The drive mechanism may take any desired form such as a crank or cam type drive to impart the desired motion to the infant support means 3 when driven by the motor 10. In the preferred form of the invention however, the drive means comprises an eccentric crank which may for example,

be a crank arm as shown in the drawings or which may be any other type of eccentric drive such as a disc having an offset drive shaft from the motor 11 which is rotated within a bearing held in the upper portion 12 of the infant support means above the motor 10. A drive of this nature will impart an orbital motion from the drive shaft of the motor 10 to the infant support means causing the infant support means to move in an orbital fashion in a plane substantially parallel to the base 1.

The motor may be a geared motor having a low speed output such as a worm and wheel geared drive having an output speed of approximately 10 rpm.

In use the infant rocker is placed upon a suitable support surface such as on the floor or on a table and the electric motor 10 is provided with a supply of electric current from a convenient power point. The infant in its bassinet is placed on the tray 4 and the motor is actuated to drive the support means in the predetermined motion such as in the orbital motion which rocks the baby within the bassinet providing a soothing motion to pacify the infant.

The device may also be provided with a timer 14 wired to the motor and controlled by a calibrated knob 13 so that the rocker may be set in motion for a predetermined period of time and then left without requiring further attention. This feature is particularly useful at night-time.

In this manner an infant rocker is provided which enables a baby to be rocked and pacified without attention from the mother who is therefore freed to perform other tasks.

Claims

1. An infant rocker comprising a base (1), infant support means (3) mounted on the base (1) by suspension means (7) which allow a predetermined degree of movement between the base and the support means and drive means (10, 11) arranged to move the support means rhythmically relative to the base characterised in that the drive means (10, 11) is arranged to move the support means in an orbital motion pattern in a plane substantially parallel to the base.

2. An infant rocker as claimed in Claim 1 characterised in that the drive means incorporates a crank type drive mechanism (11).

3. An infant rocker as claimed in Claim 1 characterised in that the drive means incorporates a cam type drive mechanism.

4. An infant rocker as claimed in any preceding claim characterised in that the drive means incorporates a low speed electric motor (10).

5. An infant rocker as claimed in any preceding claim characterised in that the suspension means comprise springs (7) extending between the base (1) and the infant support means (3).

6. An infant rocker as claimed in Claim 5 characterised in that the springs (7) are conical springs.

7. An infant rocker as claimed in any preceding

claim characterised in that the infant support means incorporates a flat support surface (4) adapted to receive and support an infant container such as a bassinet.

8. An infant rocker as claimed in Claim 7 characterised in that the infant support means (3) comprises a one piece plastics moulding in which the flat support surface comprises a central flat tray area (4) adapted to receive and support a bassinet or the like, and in which a peripheral flange (5) is provided extending upwardly from the bassinet support surface and then outwardly and downwardly in a skirt portion (6) around the periphery of the infant rocker.

Patentansprüche

1. Schaukelgerät für Kleinkinder, mit einem Grundteil (1) und einer Kinderaufnahmeeinrichtung (3), die auf dem Grundteil (1) mittels Aufhängungseinrichtungen (7) angeordnet ist, welche ein vorbestimmtes Bewegungsmaß zwischen dem Grundteil und der Aufnahmeeinrichtung zulassen, und mit einer Antriebseinrichtung (10, 11) zur rhythmischen Bewegung der Aufnahmeeinrichtung gegenüber dem Grundteil, dadurch gekennzeichnet, daß die Antriebseinrichtung (10, 11) derart ausgebildet ist, daß sie der Aufnahmeeinrichtung eine umlaufende Bewegung in einer im wesentlichen parallel zum Grundteil ausgerichteten Ebene vermittelt.

2. Schaukelgerät nach Anspruch 1, dadurch gekennzeichnet, daß die Antriebseinrichtung einen Kurbeltrieb (11) aufweist.

3. Schaukelgerät nach Anspruch 1, dadurch gekennzeichnet, daß die Antriebseinrichtung einen Nockentrieb aufweist.

4. Schaukelgerät nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Antriebseinrichtung einen langsam drehenden Elektromotor (10) aufweist.

5. Schaukelgerät nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Aufhängungseinrichtungen Federn (7) aufweisen, die sich zwischen dem Grundteil (1) und der Kinderaufnahmeeinrichtung (3) erstreckend angeordnet sind.

6. Schaukelgerät nach Anspruch 5, dadurch gekennzeichnet, daß die Federn (7) konisch ausgebildet sind.

7. Schaukelgerät nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Kinderaufnahmeeinrichtung eine flache Aufnahme fläche (4) aufweist, die zur tragenden Aufnahme eines Kinderbehälters, zum Beispiel einer Kinderwiege, ausgebildet ist.

8. Schaukelgerät nach Anspruch 7, dadurch gekennzeichnet, daß die Kinderaufnahmeeinrichtung (3) als einstückiges Kunststoffformteil ausgebildet ist, an dem die ebene Aufnahme fläche als ebene zentrale Einsenkung (4) zur Aufnahme einer Kinderwiege oder dergleichen ausgebildet ist und ein umlaufender Flansch (5) vorgesehen ist, der von der zur Aufnahme der Kinderwiege oder dergleichen vorgesehenen Aufnahme fläche

be a crank arm as shown in the drawings or which may be any other type of eccentric drive such as a disc having an offset drive shaft from the motor 11 which is rotated within a bearing held in the upper portion 12 of the infant support means above the motor 10. A drive of this nature will impart an orbital motion from the drive shaft of the motor 10 to the infant support means causing the infant support means to move in an orbital fashion in a plane substantially parallel to the base 1.

The motor may be a geared motor having a low speed output such as a worm and wheel geared drive having an output speed of approximately 10 rpm.

In use the infant rocker is placed upon a suitable support surface such as on the floor or on a table and the electric motor 10 is provided with a supply of electric current from a convenient power point. The infant in its bassinet is placed on the tray 4 and the motor is actuated to drive the support means in the predetermined motion such as in the orbital motion which rocks the baby within the bassinet providing a soothing motion to pacify the infant.

The device may also be provided with a timer 14 wired to the motor and controlled by a calibrated knob 13 so that the rocker may be set in motion for a predetermined period of time and then left without requiring further attention. This feature is particularly useful at night-time.

In this manner an infant rocker is provided which enables a baby to be rocked and pacified without attention from the mother who is therefore freed to perform other tasks.

Claims

1. An infant rocker comprising a base (1), infant support means (3) mounted on the base (1) by suspension means (7) which allow a predetermined degree of movement between the base and the support means and drive means (10, 11) arranged to move the support means rhythmically relative to the base characterised in that the drive means (10, 11) is arranged to move the support means in an orbital motion pattern in a plane substantially parallel to the base.

2. An infant rocker as claimed in Claim 1 characterised in that the drive means incorporates a crank type drive mechanism (11).

3. An infant rocker as claimed in Claim 1 characterised in that the drive means incorporates a cam type drive mechanism.

4. An infant rocker as claimed in any preceding claim characterised in that the drive means incorporates a low speed electric motor (10).

5. An infant rocker as claimed in any preceding claim characterised in that the suspension means comprise springs (7) extending between the base (1) and the infant support means (3).

6. An infant rocker as claimed in Claim 5 characterised in that the springs (7) are conical springs.

7. An infant rocker as claimed in any preceding

claim characterised in that the infant support means incorporates a flat support surface (4) adapted to receive and support an infant container such as a bassinet.

8. An infant rocker as claimed in Claim 7 characterised in that the infant support means (3) comprises a one piece plastics moulding in which the flat support surface comprises a central flat tray area (4) adapted to receive and support a bassinet or the like, and in which a peripheral flange (5) is provided extending upwardly from the bassinet support surface and then outwardly and downwardly in a skirt portion (6) around the periphery of the infant rocker.

Patentansprüche

1. Schaukelgerät für Kleinkinder, mit einem Grundteil (1) und einer Kinderaufnahmeeinrichtung (3), die auf dem Grundteil (1) mittels Aufhängungseinrichtungen (7) angeordnet ist, welche ein vorbestimmtes Bewegungsmaß zwischen dem Grundteil und der Aufnahmeeinrichtung zulassen, und mit einer Antriebseinrichtung (10, 11) zur rhythmischen Bewegung der Aufnahmeeinrichtung gegenüber dem Grundteil, dadurch gekennzeichnet, daß die Antriebseinrichtung (10, 11) derart ausgebildet ist, daß sie der Aufnahmeeinrichtung eine umlaufende Bewegung in einer im wesentlichen parallel zum Grundteil ausgerichteten Ebene vermittelt.

2. Schaukelgerät nach Anspruch 1, dadurch gekennzeichnet, daß die Antriebseinrichtung einen Kurbeltrieb (11) aufweist.

3. Schaukelgerät nach Anspruch 1, dadurch gekennzeichnet, daß die Antriebseinrichtung einen Nockentrieb aufweist.

4. Schaukelgerät nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Antriebseinrichtung einen langsam drehenden Elektromotor (10) aufweist.

5. Schaukelgerät nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Aufhängungseinrichtungen Federn (7) aufweisen, die sich zwischen dem Grundteil (1) und der Kinderaufnahmeeinrichtung (3) erstreckend angeordnet sind.

6. Schaukelgerät nach Anspruch 5, dadurch gekennzeichnet, daß die Federn (7) konisch ausgebildet sind.

7. Schaukelgerät nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Kinderaufnahmeeinrichtung eine flache Aufnahme fläche (4) aufweist, die zur tragenden Aufnahme eines Kinderbehälters, zum Beispiel einer Kinderwiege, ausgebildet ist.

8. Schaukelgerät nach Anspruch 7, dadurch gekennzeichnet, daß die Kinderaufnahmeeinrichtung (3) als einstückiges Kunststoffformteil ausgebildet ist, an dem die ebene Aufnahme fläche als ebene zentrale Einsenkung (4) zur Aufnahme einer Kinderwiege oder dergleichen ausgebildet ist und ein umlaufender Flansch (5) vorgesehen ist, der von der zur Aufnahme der Kinderwiege oder dergleichen vorgesehenen Aufnahme fläche



nach oben ragt und von dort als Randteil (6) nach außen und unten verlaufend den Umfang des Schaukelgerätes umragt.

Revendications

1. Appareil berceur pour petit enfant comprenant une base (1), un dispositif de support pour l'enfant (3) monté sur la base (1) par des moyens de suspension (7) qui permettent un degré de mouvement prédéterminé entre la base et le dispositif de support, et un dispositif d'entraînement (10, 11) propre à déplacer le dispositif de support de manière rythmique par rapport à la base, caractérisé en ce que le dispositif d'entraînement (10, 11) est prévu pour déplacer le dispositif de support en un mouvement orbital dans un plan en substance parallèle à la base.

2. Appareil berceur pour petit enfant suivant la revendication 1, caractérisé en ce que le dispositif d'entraînement comprend un mécanisme d'entraînement du type à manivelle (11).

3. Appareil berceur pour petit enfant suivant la revendication 1, caractérisé en ce que le dispositif d'entraînement comprend un mécanisme d'entraînement du type à came.

4. Appareil berceur pour petit enfant suivant l'une quelconque des revendications précédentes, caractérisé en ce que le dispositif

d'entraînement comprend un moteur électrique à basse vitesse (10).

5. Appareil berceur pour petit enfant suivant l'une quelconque des revendications précédentes, caractérisé en ce que les moyens de suspension comprennent des ressorts (7) qui s'étendent entre la base (1) et le dispositif de support (3) pour l'enfant.

6. Appareil berceur pour petit enfant suivant la revendication 5, caractérisé en ce que les ressorts (7) sont des ressorts coniques.

7. Appareil berceur pour petit enfant suivant l'une quelconque des revendications précédentes, caractérisé en ce que le dispositif de support pour l'enfant comprend une surface de support plane (4) propre à recevoir et à supporter un lit de petit enfant tel qu'un moïse.

8. Appareil berceur pour petit enfant suivant la revendication 7, caractérisé en ce que le dispositif de support (3) pour l'enfant comprend un élément moulé en matière plastique d'une seule pièce, dans lequel la surface de support plane comprend une zone de plateau centrale plane (4) propre à recevoir et à supporter un moïse ou l'équivalent, et une plage périphérique (5) est prévue, cette plage s'étendant vers le haut à partir de la surface de support du moïse, puis vers l'extérieur et vers le bas pour former une jupe (6) entourant la périphérie de l'appareil berceur.

5

10

15

20

25

30

35

40

45

50

55

60

65

4

