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W. O. GOSSELIN

2,534,438

CRADLE HAVING A REMOVABLE CRIB

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Fig 1.

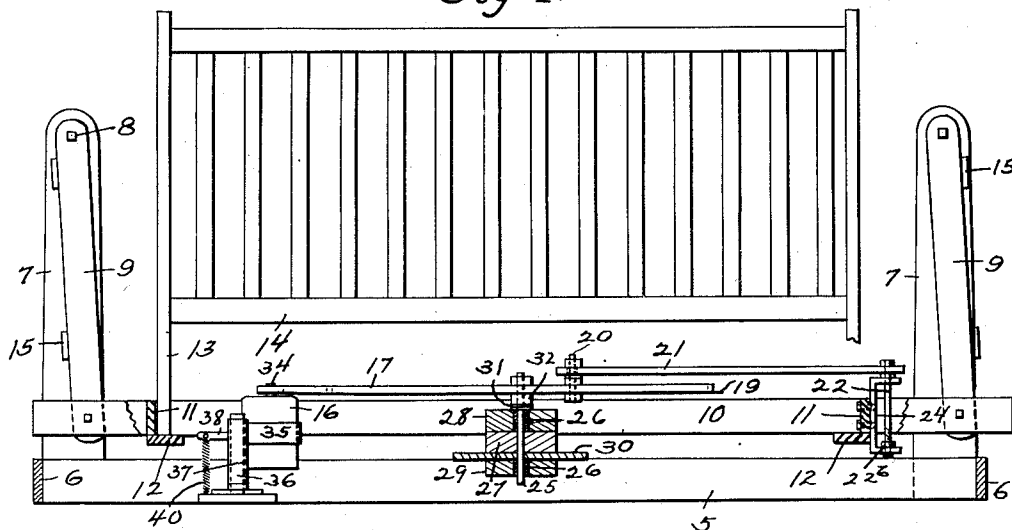


Fig 2.

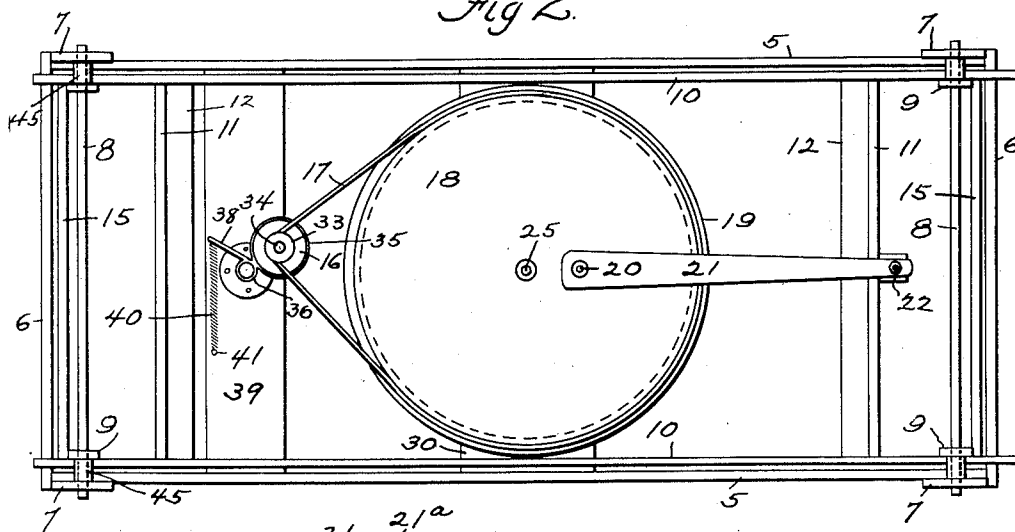
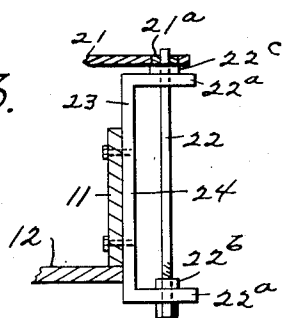


Fig 3.



INVENTOR.

William O. Gosselin.

BY

Shepherd Campbell

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CRADLE HAVING A REMOVABLE CRIB

William O. Gosselin, Ashland, Wis.

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3 Claims. (Cl. 5—109)

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The object of the present invention is to provide an automatic electric cradle. By the use of this device the work of the mother will be greatly reduced since the cradle will automatically rock the baby to sleep while the mother is free to do other things. Further the cradle may be controlled from the bed of the mother or even from another room thus making it unnecessary for the parent to arise in the night to soothe a crying child.

A further object of the invention is to provide a structure of this character comprising a fixed main frame and an oscillating or rocking auxiliary frame the latter being adapted to receive the legs of and to support conventional cribs of many different designs. Thus it is not necessary for a user to purchase a crib in order to get the advantages of this invention if he already has a crib. It is a primary object of the present invention to provide a structure of the character indicated which will be economical of construction and very quiet and easy in operation. I preferably construct the device in such manner that it may be made largely of wood, though I wish it to be understood that the invention is not limited as to the nature of the material employed. However wood is relatively cheap, it is easily worked and it tends to deaden noises which would otherwise be present where the structure was made largely of metal.

The invention will be best understood by reference to the accompanying drawing wherein:

Fig. 1 is a side view of the device of the invention with parts broken away and in section.

Fig. 2 is a plan view of the structure of Fig. 1 and Fig. 3 is a detailed view of a bracket constituting a part of the connection for the rear end of the connecting rod, hereinafter described.

The fixed base frame comprises the side members 5 and end members 6. Upstanding posts 7 at the four corners of the base frame constitute supports for transverse rock shafts 8. Swinging links 9 hung upon these rock shafts are pivotally connected at their lower ends to longitudinally extending side frame members 10 on the oscillating frame. The members 10 are tied together by cross bars 11 and 12 the latter being disposed to receive and support the legs 13 of a conventional type of crib 14. The cross bars 15 may extend between and tie together the swinging links 9 at each end of the cradle. For imparting a relatively slow and gentle oscillation to the swinging frame and consequently to the crib I provide an electric motor 16 which drives through a belt 17 to a large, horizontally disposed, disc-like wheel 18.

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This wheel is preferably, though not necessarily, made of wood for reasons hereinbefore stated. It may be provided about its lower edge with an outstanding flange 19 which constitutes a guide for the belt and prevents the belt from slipping downwardly from the wheel. A wrist pin 20 carried by the wheel engages the inner end of a connecting rod 21. The outer end of this connecting rod is pivotally connected with the upstanding pivot bolt 22 of a supporting bracket 23. Upstanding leg 24 of this bracket is bolted to one of the cross bars 11 of the swinging frame. Consequently reciprocation of the connecting rod will impart swinging movement to said frame.

The disc 18 is carried by a vertical shaft 25 said shaft being journaled in suitable bushings 26 of bearing blocks 27, 28 and 29. These blocks are in turn supported upon a cross board 30 said board extending between and being supported by the side frame members of the fixed base. A conventional anti-friction thrust washer 31 is disposed between the upper bushing 26 and a hub or collar 32 of the disc 18. The belt 17 passes over a small pulley 33 that is fast on the motor shaft 34. The motor is supported by a bracket or strap 35 said strap constituting a sleeve 36 said sleeve being mounted to turn upon an upstanding pin 37 said pin in turn being carried by a flange 38. This flange is secured to a cross board 39 said board in turn extending between and being secured to the side frame members of the base. One end of a spring 40 is connected to the board 39 at 41 and the other end of a spring 40 is connected to arm 38 which extends from the sleeve 36. The function of the spring is to tend to swing the motor bodily toward the left in Fig. 2 to thereby maintain the proper tension upon the belt at all times.

The mounting and the connection for the rear end of the connecting rod is best illustrated in Fig. 3. Here it will be seen that the pivot pin 22 passes through horizontal arms 22a which project rearwardly from the vertical member 4 of the bracket. The pin 22 is bound securely in place by a lock nut 22b. An anti-friction thrust washer 22c is disposed between the upper face of the upper arm 22a of the bracket and a suitable bronze or other metallic bushing 21a of the connecting rod 21. Spacing collars 45 may be disposed between the inner faces of the posts 7 and the outer faces of the links 9 to hold the parts in proper alignment with each other. The shafts 8 may be mounted to turn in the posts 7 and the links may be fixed to the shafts or the shafts may be fixed in the posts and the links

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may turn upon the shafts. This is an engineering detail and a mere matter of choice. I am aware of the fact that it has heretofore been proposed to actuate cribs by means of electric motors. However I know of no construction which will impart the same gentle and noiseless action to a crib yielded by the structure herein shown and described. Nor do I know of any structure in which a conventional crib may be mounted upon the device of my invention.

It is found that the light hum set up by the motor tends to have a soothing effect upon a baby much as though the mother were humming or singing to it. I wish it to be understood that the invention is not limited to the precise construction herein set forth but that it includes within its purview whatever changes fairly come within either the terms or the spirit of the appended claims.

Having described my invention what I claim is:

1. A device of the character described comprising a fixed base frame, a vertically disposed electric motor supported thereon, a pulley upon the shaft of said motor, a relatively large horizontally disposed disc rotatively mounted upon the base frame, a belt extending about said pulley and about the periphery of said disc, a rigid, rectangular crib carrying frame, comprising portions positioned to freely receive and support the legs of a freely removable baby's crib, swinging links by which the crib carrying frame is mounted for oscillation with respect to the fixed frame, said crib carrying frame comprising transverse connecting members extending between longitudinally extending side frame members of the said crib carrying frame, a pivot mounted upon one of said transverse members, a connecting rod engaged with said pivot and a wrist pin carried by said disc with which the other end of said connecting rod is pivotally engaged.

2. In a device of the character described a fixed base frame member comprising longitudinally extending side frame members and connecting end members, a board extending between and supported by the side frame members at substantially the center of the base frame, bearing elements carried by said board, a vertical

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shaft supported in said bearing elements, a relatively large horizontally disposed disc upon said shaft, a second board extending between and supported by the side frame members of the base at a point toward one end of the same, means for mounting a motor for swinging movement in a horizontal plane and upon said board the latter being an electric motor of the vertical type, a relatively small pulley upon the shaft of said motor and lying in the plane of said disc, a belt extending about the pulley and about the periphery of the disc, upstanding posts at the four corners of the base frame, swinging links supported from said posts, a crib supporting frame carried by said links, a wrist pin carried by the disc, a connecting rod engaged with said wrist pin at one of its ends and means for pivotally connecting the other end of said connecting rod to the crib supporting frame.

3. A cradle swinging mechanism comprising a fixed rectangular base frame, a crib carrying frame consisting of side and end members rigidly united to form a rectangular rigid frame, embodying members which present upwardly facing portions dimensioned and positioned to receive the lower ends of the legs of a conventional baby's crib, upstanding posts at the four corners of the base frame, four links pivoted at their upper ends to the upper portions of said posts and at their lower ends to the said crib carrying frame in a manner to permit the latter to swing back and forth in the direction of its length, an electric motor, a disc driven from said motor and a connecting rod pivoted to the disk and to the crib carrying frame for imparting swinging movement to the latter.

WILLIAM O. GOSSELIN.

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