Crib Having Means for Providing a Reciprocating, Longitudinal Motion Thereto

Henry Lee Edgmon, Lebanon, Oreg.

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1 Claim. (Cl. 5—109)

This invention relates generally to cribs for caring for infants and particularly to a crib having means for providing a reciprocating, longitudinal motion thereto.

The main object of this invention is to provide a crib with a limited longitudinal reciprocating movement, as well as a variable number of reciprocations per minute.

The second object is to produce a form of crib construction which will be inexpensive to manufacture and in which the crib and supporting base are easily separated to give access to the working parts and in which the resulting movement is made noiseless and with low power requirement.

I accomplish these and other objects in the manner set forth in the following specification as illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of the crib.
Fig. 2 is a perspective view of the supporting base with portions broken away in section to show the construction as well as the motor and speed reducer.
Fig. 3 is a section taken along the line 3—3 in Fig. 6.
Fig. 4 is a plan of the speed reducer showing the eccentric's relation to the Scotch yoke shown in Fig. 5.
Fig. 5 is a perspective view of the crib portion viewed from the side.

Fig. 6 is an enlarged section taken along the line 6—6 in Fig. 1.
Fig. 7 is a section taken along the line 7—7 in Fig. 6.
Fig. 8 is a fragmentary view of a modified form of track for providing an undulating motion.

Referring to the drawings, the device is composed of two separable parts—a base 10 and a crib 11. The base 10 is comprised of a pair of floor engaging ends 12 between which is a shelf 13, and the portion of the ends 12 above the shelf 13 is closed by the two apron members 14. On the shelf 13 is mounted an electric motor 15 whose cord 16 passes through the shelf 13 to a connector plug 17. On the shelf 13 is also a speed-reducing element 18 which is driven by the motor 15 through a belt 19. The speed reducer 18 is of the type which makes possible the selection of any one of a variety of speeds.

The power take-off of the reducer 18 terminates in an eccentric 20. The eccentric 20 has mounted thereon a slide block 21, which is slidable between the liners 22 of the Scotch yoke 23. The members of the yoke 23 are secured to the plate 24, which is fastened to the under side of the crib bottom 25 by means of screws 26. On each side of the eccentric 20 is secured a flange disk 27, which disks are secured to the eccentric 20 by means of screws 28.

Near the upper edge of each apron 14 is mounted a transverse shaft 29 in supports 30 secured to the aprons 14. On each end of each shaft 29 is a roller 31, preferably of the anti-friction type.

The crib section 11 is comprised of the bottom 25, to which are secured the short tracks 32 which ride on the rollers 31. To the bottom 25 are also secured the rollers 33 which engage the short tracks 34 secured to the inner sides of the aprons 14.

The usual vertical spindles 35 and corner posts 36, joined by the top rail 37 and bottom rail 38 are also provided.

It can be seen that the section 11 can float horizontally on the rollers 31 and be held against lateral movement by the rollers 33. Since the movement is obtained by a slow reversal in the change of directions and the moving parts are well supported, there is no vibration whatsoever imparted to the crib 11.

Variations in length of stroke are provided by a selection of eccentrics 20 having a variety of offset or throw as is the common practice.

In Fig. 8 is shown a modified form of curved track 32-A which is supported by a shim 32-B from the crib bottom 25. Any desired shape of track 32-A may be employed without departing from the spirit of this invention.

I claim:

A reciprocating crib structure comprising a base, said base having a shelf surrounded by upstanding side and end walls defining an open top box for containing a reciprocating mechanism, four crib supporting rollers mounted on said side walls and projecting thereabove, vertically disposed horizontal side wall tracks on the inside of said side walls, a motor driven eccentric mounted on said shelf, a crib having a bottom equipped with vertically curved tracks to ride on said rollers, each of said curved tracks being concave on its under side, rollers on the bottom of said crib engageable with said side wall tracks, and a Scotch yoke projecting downwardly from the bottom of said crib and engaging said eccentric to impart longitudinal reciprocation to said crib when said eccentric rotates, said yoke having an open lower end for disengagement from said eccentric upon vertical movement of said crib.

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