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MOTOR DRIVEN OSCILLATING BASSINET SUPPORT

Filed April 20, 1962

2 Sheets-Sheet 1

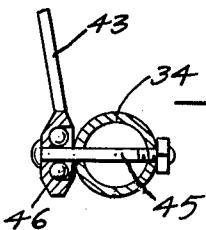
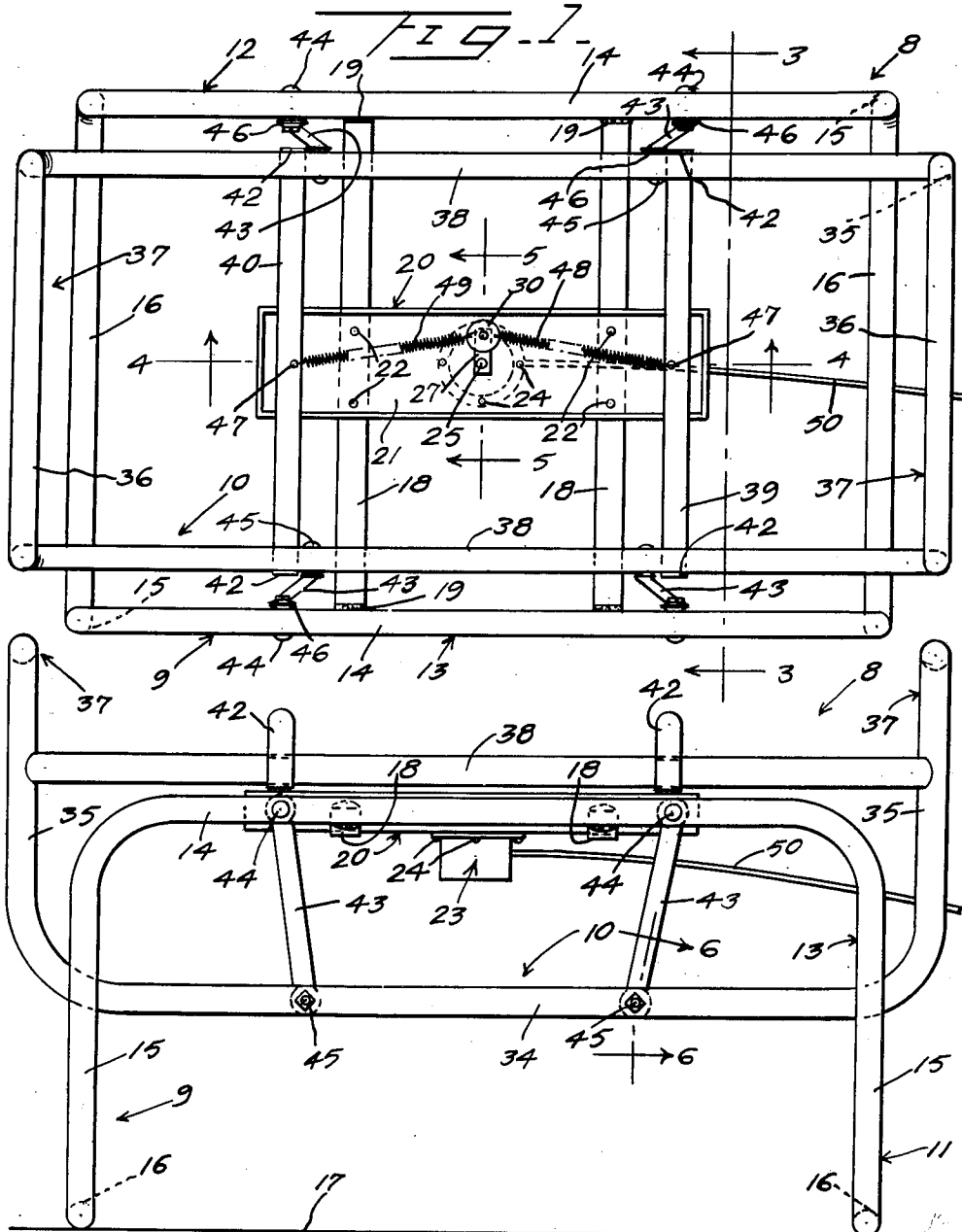


FIG. 2.

FIG. 6.

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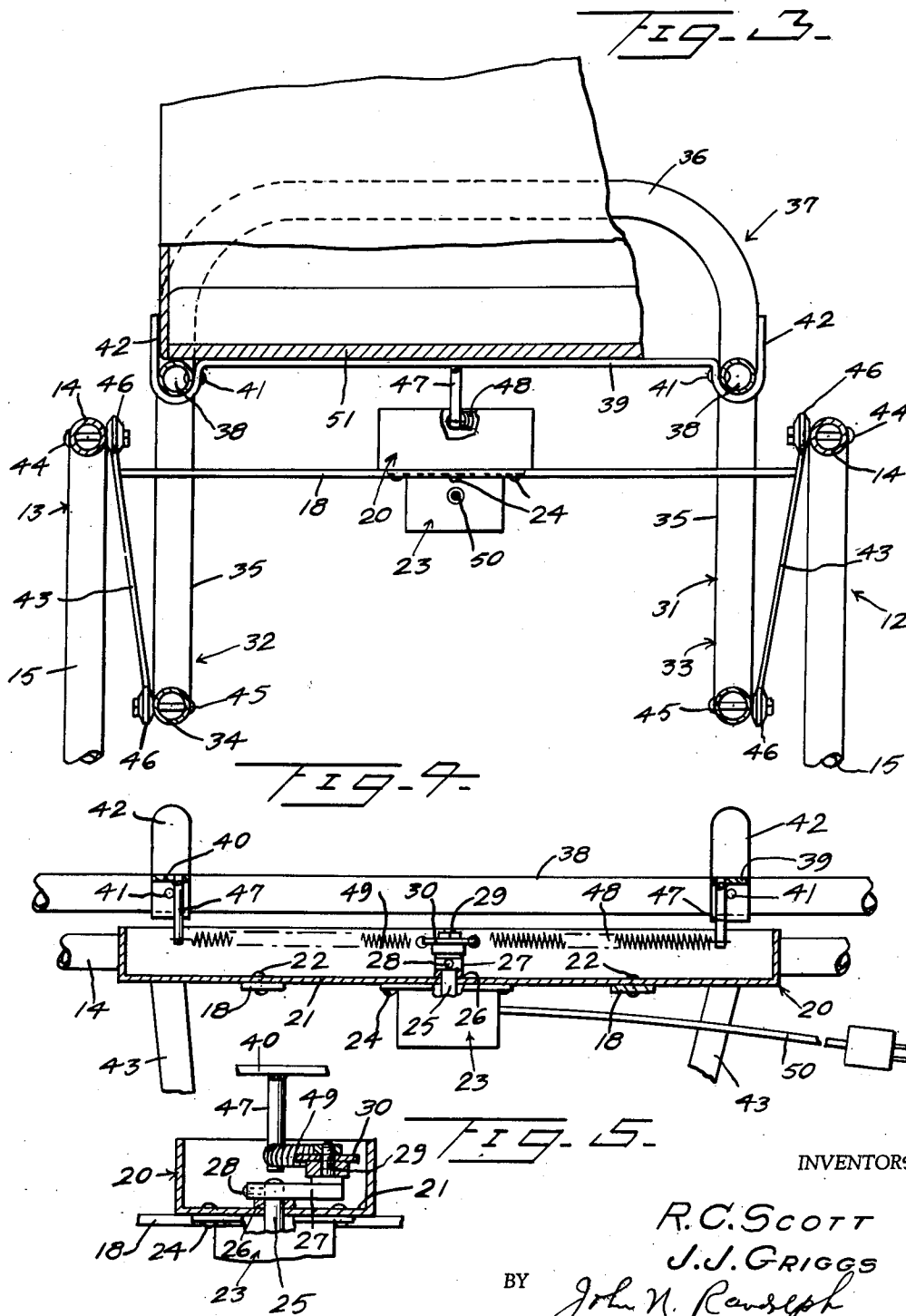
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MOTOR DRIVEN OSCILLATING BASSINET SUPPORT

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2 Claims. (Cl. 5-109)

This invention relates to a novel support on which a conventional bassinet is adapted to be detachably mounted including means for gently oscillating a part of the support and the bassinet carried thereby for soothing and lulling an infant resting in the bassinet.

More particularly, it is an object of the present invention to provide a support including a base structure and a bassinet supporting structure which is swingably suspended by the base structure and which detachably mounts the bassinet for swinging or oscillating movement therewith.

Another object of the invention is to provide a motor supported by the base structure and connected to the bassinet supporting structure by a novel resilient or elastic drive whereby a gentle yielding force is imparted from the fixedly disposed power source to the bassinet supporting structure to cause said bassinet supporting structure to oscillate in a very smooth and gentle manner.

Still another object of the invention is to provide a yielding or elastic drive connection between a power source and a part to be reciprocated or oscillated thereby and which will enable the use of a power source having much less power than would be required if a rigid and positive drive connection was utilized.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawings illustrating a presently preferred embodiment thereof, and wherein:

FIGURE 1 is a top plan view of the motor driven oscillating bassinet support;

FIGURE 2 is a side elevational view thereof;

FIGURE 3 is an enlarged fragmentary cross sectional view thereof, taken substantially along a plane as indicated by the line 3-3 of FIGURE 1;

FIGURE 4 is an enlarged fragmentary longitudinal sectional view taken substantially along a plane as indicated by the line 4-4 of FIGURE 1;

FIGURE 5 is an enlarged fragmentary cross sectional view, taken substantially along a plane as indicated by the line 5-5 of FIGURE 1, and

FIGURE 6 is an enlarged fragmentary transverse sectional view taken substantially along the line 6-6 of FIGURE 2.

Referring more specifically to the drawings, the motor driven oscillating bassinet support in its entirety and comprising the invention is designated generally 8 and broadly includes a base structure 9 and a bassinet supporting structure 10.

The base structure 9 comprises an elongated frame 11 which is preferably of tubular construction and which includes arch shaped side members 12 and 13 each composed of an elongated top portion 14 having at its ends depending legs 15. The legs 15 are disposed at the corners of the supporting structure 9 and the complementary end legs of the sides 12 and 13 are integrally connected at their lower ends by coplanar bottom cross members 16 which integrally connect the sides 12 and 13 to one another in spaced apart substantially parallel relation. Said bottom cross members 16 constitute the only parts of the bassinet support which are adapted to rest upon a suitable supporting surface 17, such as a floor. A pair of metal strap members 18 extend between the

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top portions 14 of the sides 12 and 13 and are welded or otherwise permanently secured at their ends thereto, as seen at 19. Said metal or rigid strap members 18 are disposed in spaced apart relation to one another and provide a support for an elongated, relatively shallow open top receptacle 20, which is disposed longitudinally of the base structure 9, approximately midway between the sides 12 and 13, and which has a substantially flat bottom 21, portions of which rest on the straps 18 and are secured thereto by suitable fastenings 22.

An electric motor 23 is disposed beneath the central portion of the bottom 21 and is secured thereto by fastenings 24. The armature shaft 25 of the motor 23 extends upwardly through a bearing 26 of the bottom 21, in which it is journaled, and a crank 27 is secured in any suitable manner, as by a setscrew 28 to the shaft 25, above the bearing 26 and within the housing 20. The crank 27 has an upstanding crankpin 29 which is radially spaced from the shaft 25, as best seen in FIGURE 5, and a bearing 30 is journaled on said crankpin.

The support structure 10 includes an elongated frame 31, which is likewise preferably of tubular construction and which includes corresponding elongated sides 32 and 33 each composed of a longitudinally extending bottom bar 34 and upstanding end posts 35. The complementary end posts 35 are integrally joined at their upper ends by a top cross member 36, each of which cross members combines with two of the end posts to form an arch shaped end portion, designated generally 37, as best seen in FIGURE 3. Each side 32 and 33 also includes a top bar 38 which extends longitudinally between and is secured at its ends to the uprights 35 of said side and which is disposed substantially above the bottom bar 34 but below the level of the top portions 36. Two metal strap members 39 and 40 extend transversely between the top bars 38 and are secured thereto in any suitable manner as by fastenings 41. The strap members 39 extend beyond the fastenings 41 around the undersides of the bars 38 and have upstanding terminal portions 42 which project above the bars 38 and which are capable of yielding outwardly relative to one another, for a purpose which will hereinafter become apparent. As seen in FIGURE 1, the straps 39 and 40 are preferably spaced apart a distance greater than the spacing between the straps 18.

The bassinet supporting structure 10, as seen in FIGURES 1 and 3, is preferably somewhat longer than the base structure 9 and is also narrower than said base structure so that the bassinet supporting structure will fit with clearance between the sides 12 and 13 of the base structure. A pair of longitudinally spaced hanger bars 43 extend downwardly from each top bar 14. The hanger bars 43 are swingably connected to the inner sides of the top bars 14 by nut and bolt fastenings 44 and extend downwardly and inwardly therefrom at an incline, as seen in FIGURE 3. The lower ends of the hanger bars are connected to the outer sides of the bottom bars 34 by nut and bolt fastenings 45 and, as seen in FIGURE 2, said hanger bars 34 are inclined slightly toward one another from their upper to their lower ends. The hanger bars 34 have anti-friction bearings 46 at the ends thereof, as best seen in FIGURE 6, through which the bolts of the fastenings 44 and 45 extend to enable the hanger bars to turn freely on said bolts.

Rigid pins 47 are fixed to and extend downwardly from the straps 39 and 40, midway of the ends of said straps to provide anchors for remote ends of two contractile coiled springs 48 and 49 which extend from the straps 39 and 40, respectively, toward one another and which are connected at their adjacent ends to the bearing 30 on opposite sides of the crankpin 29. The pins 47 extend

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downwardly into the housing 20 in which the springs 48 and 49 are disposed under tension.

An electric cord 50 leads from the electric motor 23 and is adapted to be connected in a conventional manner to an ordinary domestic electrical outlet for supplying current to the motor 23.

A conventional bassinet 51 is adapted to be supported demountably upon the upper side bars 38 and straps 39 and 40 and may be yieldably gripped between the upstanding terminals 42. The bassinet 51, partially illustrated in FIGURE 3, is adapted to contain an infant.

Assuming that the motor 23 is energized for rotating the shaft 25 and crank 27 in a clockwise direction, for example, as seen in FIGURE 1, as the bearing 30 moves clockwise from its position of FIGURE 1 it will exert a pulling force on the spring 49 for pulling the bassinet supporting structure from left to right relative to the base structure 9. After the bearing is moved in an arc of 90° from its position of FIGURE 1 to a position in alignment with the two springs 48 and 49, in which position the spring 49 will be under tension while the spring 48 will be retracted, the bearing 30 will commence its half revolution of travel away from the strap 39 and toward the strap 40, during which the spring 48 will be tensioned while the spring 49 will be allowed to retract, and during which movement the bassinet supporting structure 10 will move in the opposite direction or from right to left of FIGURES 1 and 2. During the initial part of this movement and while the spring 49 is tensioned to a greater extent than the spring 48, said spring 49 will exert a pulling force on the bearing 30 greater than the retarding force exerted on the spring 48, and the spring 48 will be initially stretched so that reversal of direction of movement of the bassinet support 10 will be gentle and gradual rather than sudden, as would occur if rigid connecting rods were substituted for the springs. Thus, actually the extent of travel of the support 10 in either direction is less than the diameter of the arc described by the crankpin 29 since each spring is extended to some extent during each revolution of the shaft 25. Since the support 10 is swingably suspended from the base structure 9 by the hanger bars 43 the back and forth movement of the support 10 constitutes an oscillating rather than a reciprocating motion. By utilizing the springs 48 and 49 as the drive connection between the crankpin 29 and the oscillating bassinet support 10, in addition to obtaining a very smooth and gentle back and forth swinging movement of the bassinet support and the bassinet mounted thereon, the apparatus may utilize a very inexpensive electric motor 23 as its power source, having a low thrust and low r.p.m., since it is not necessary that the motor have sufficient power to place the bassinet supporting structure 10 in motion initially from an intermediate starting position, since it is possible for the shaft 25 to rotate the crank 27, pin 29 and bearing 30 without actually moving the bassinet supporting structure 10, by merely alternately tensioning the springs 48 and 49. This eliminates the need for a clutch mechanism, which would otherwise be required since oscillating movement of the

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supporting structure 10 may be momentarily interrupted by a mother leaning against said support.

Various modifications and changes are contemplated and may be resorted to, without departing from the function or scope of the invention as hereinafter defined by the appended claims.

We claim as our invention:

1. A bassinet support comprising an elongated base structure including a frame having arch shaped sides and bottom end members extending between and integrally joined to complementary ends of said sides, said end members constituting coplanar bottom portions of the frame adapted to rest on a supporting surface, a bassinet supporting structure including transversely disposed arch shaped end portions and side portions extending between and connected to said end portions, said side portions each including a bottom bar and a top bar, said bassinet supporting structure being of a width such that said side portions thereof are disposed between and spaced from said arch shaped sides, a pair of hanger bars swingably connected to and extending downwardly from upper portions of each of the arch shaped sides and having lower ends pivotally connected to said bottom bars for suspending the bassinet supporting structure in the base structure for oscillating movement longitudinally thereof, said hanger bars being of a length to support the top bars above the level of said arch shaped sides, a supporting structure supported by and extending between the upper portions of the arch shaped sides, a power source having a rotatively driven crank, said power source being supported by said supporting structure, longitudinally spaced metal strap members extending between and secured to said top bars, said strap members having portions extending between the top bars and disposed substantially coplanar with upper surfaces thereof, a pair of contractile coil springs having adjacent ends connected to the crankpin, means connecting remote ends of said springs to said strap members for converting rotary motion of the crank to impart an oscillating movement to the bassinet supporting structure, said top bars and the portions of the strap members extending therebetween being adapted to support a bassinet on said bassinet supporting structure, and said strap members having yieldable end portions extending upwardly from outer sides of the top bars and between which the sides of the bassinet are adapted to be yieldably clamped.

2. A bassinet support as in claim 1, said arch shaped end portions extending to above the level of said top bars and being adapted to provide end abutments for the bassinet.

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