July 10, 1956 O. L. KNUDSON ET AL 2,753,572

RECIPROCATING BED

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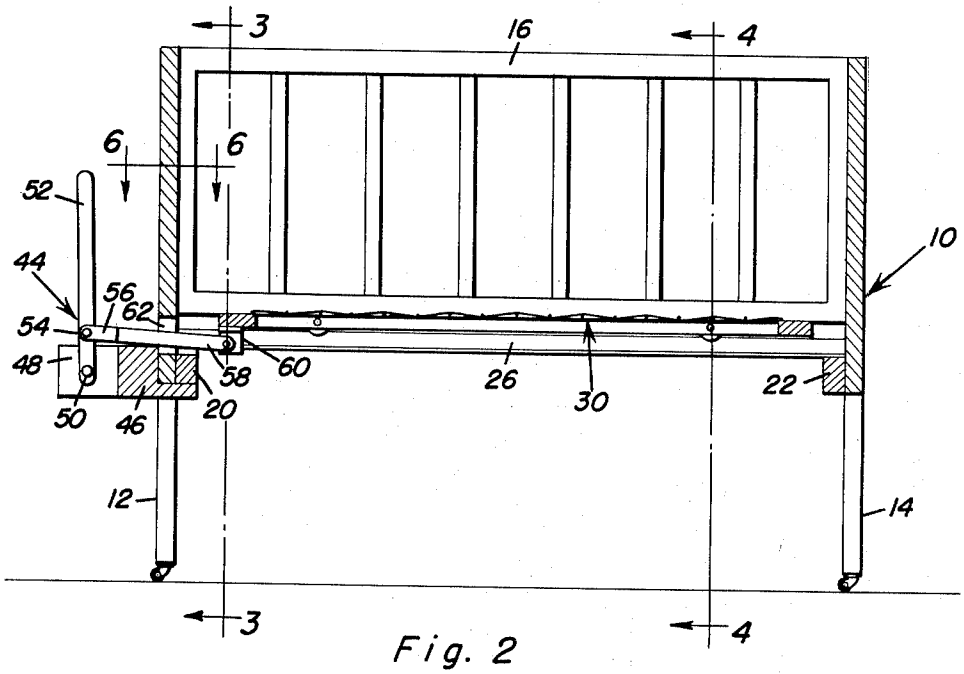


Fig. 2

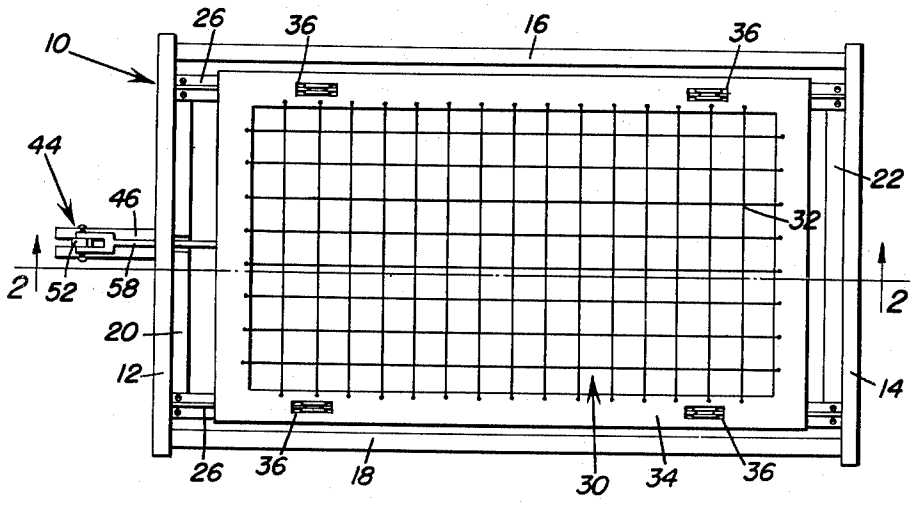


Fig. 1

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Fig. 3

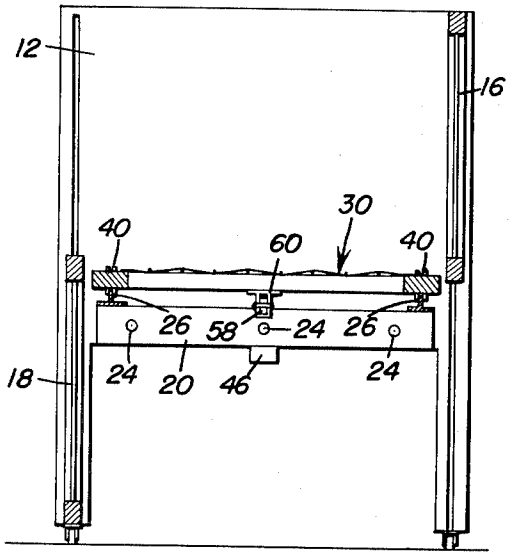


Fig. 4

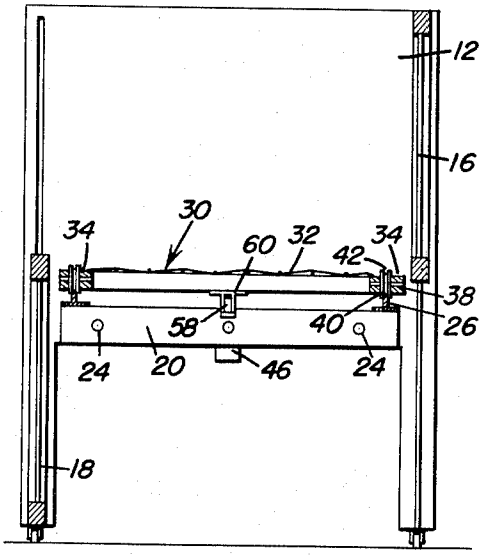


Fig. 5

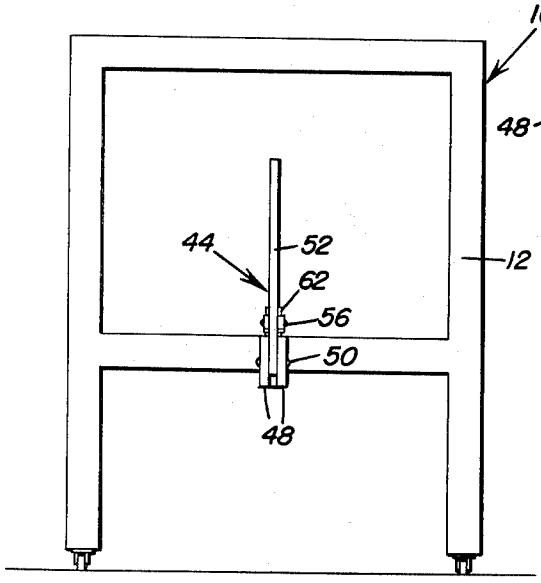
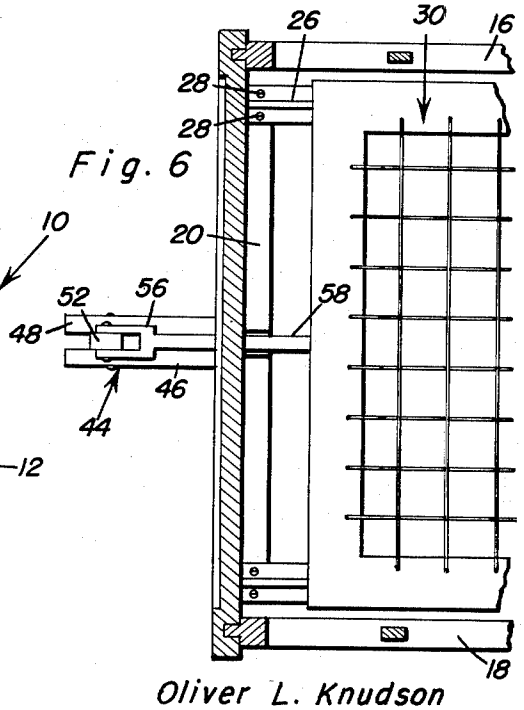


Fig. 6



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RECIPROCATING BED

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Application April 14, 1953, Serial No. 348,618

1 Claim. (Cl. 5—101)

This invention relates in general to an improved bed construction, and more specifically to a reciprocating bed.

While there has been devised numerous types of cradles to facilitate the rocking of a small child to sleep, the character of the construction of such cradles has always been such that there is a possibility of the cradle rocking due to the shifting of the child's weight so as to accidentally throw the child out of the cradle when he or she is standing therein. It is therefore the primary object of this invention to provide an improved bed for small children and the like in which at least selective parts thereof may be reciprocated to induce sleep and at the same time which is so constructed and designed whereby all possibility of tipping of the bed structure is eliminated.

Another object of this invention is to provide an improved bed construction which includes a supporting frame having a mattress support reciprocatingly mounted thereon, said mattress support being connected to actuating means carried by the supporting frame whereby the same may be selectively reciprocated to generally shake a child lying within the confines of the bed.

Another object of this invention is to provide an improved reciprocating bed construction which is of an extremely simple construction and which is formed of readily obtainable material so as to be economically feasible.

A further object of this invention is to provide an improved reciprocating bed construction which is readily adaptable to beds of the type now commonly being utilized and which may be incorporated therein without any change in design whatsoever.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a top plan view of a bed conforming to the spirit of this invention and shows the general outline of the same;

Figure 2 is a longitudinal vertical sectional view taken substantially upon the plane indicated by the section line 2—2 of Figure 1 and shows the general relationship of the various elements of the bed;

Figure 3 is a transverse vertical sectional view taken substantially upon the plane indicated by the section line 3—3 of Figure 2 and shows the manner in which the mattress support is reciprocatingly mounted within the supporting frame of the bed;

Figure 4 is a transverse vertical sectional view taken substantially upon the plane indicated by the section line 4—4 of Figure 2 and further shows the manner in which the mattress support is reciprocatingly mounted;

Figure 5 is an end elevational view of the bed of Figure 1 and shows the position of actuating means for the mattress support; and

Figure 6 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 6—6 of Figure 2 and shows the exact relationship

between the actuating means, the supporting frame and the mattress support.

Referring now to the drawings in detail, it will be seen that there is illustrated a baby bed of the drop-side type, the baby bed being referred to in general by the reference numeral 10. The baby bed includes generally a head construction 12, a foot construction 14, a fixed side 16 and a droppable side 18. It will be understood that these components of the bed 10 are identical with conventional baby beds and are secured together in any desired manner.

Carried by the head frame 12 and the foot frame 14 on their inner sides are aligned, transversely extending support members 20 and 22, respectively. These members are secured to their respective frames by transversely spaced, suitable fasteners 24.

As is best illustrated in Figures 1 and 3, extending between the support members 20 and 22 with their ends resting thereon are longitudinally extending trackways 26. The trackways 26 are preferably of an inverted T-shape and are secured to their respective support members by suitable fasteners 28. It will be noted that the individual trackways are disposed adjacent the respective sides of the bed 10.

The bed 10 also includes a mattress support which is referred to in general by the reference numeral 30. For convenience sake the mattress support is in the form of a flat wire spring 32 having a rectangular supporting frame 34. The rectangular supporting frame 34 is of a size to extend transversely substantially between the sides 18 and 16, but is of a length lesser than the length of such sides.

Referring now to Figure 1 in particular, it will be seen that the support frame has formed in the sides thereof transversely aligned recesses 36. Disposed within each of the recesses 36 and mounted for rotation on a pin 38 is a wheel 40. In order to facilitate guiding engagement of the wheel 40 with one of the trackways 26, the wheel is provided with a medial circumferential groove 42 for receiving an upstanding portion of the trackway 26. Inasmuch as the mattress support 30 is of a length lesser than the length of the bed 10 and inasmuch as it is reciprocatingly carried by the trackways 26, it will be seen that the same is free to be selectively reciprocated within the confines of the supporting frame of the bed.

In order that the mattress support 30 may be selectively reciprocated the bed 10 is provided with actuating means which are referred to in general by the reference numeral 44. The actuating means 44 includes a mounting bracket 46 which is secured to both the head frame 12 and its associated support member 20 in the manner best illustrated in Figure 2. The mounting bracket 46 is bifurcated at its forward end and includes spaced arms 48. Disposed between the spaced arms 48 and pivotally connected thereto by a pivot pin 50 is an upstanding actuating lever 52. Connected to the actuating lever 52 intermediate its ends by a pivot pin 54 is a bifurcated forward end 56 of an actuating link 58. On the opposite end of the actuating link is pivotally connected an attaching bracket 60 carried by the mattress support 30. It will be noted that the head frame 12 is provided with a centrally located opening 62 through which the actuating link 58 passes.

In view of the foregoing, it will be seen that when it is desired to induce sleep to a child lying within the bed 10 on a mattress (not shown) supported by mattress support 30, the actuating lever 52 is reciprocated back and forth with the resultant reciprocation of the mattress support 30. In this manner a vibrating motion is imparted to the child who is quickly induced to go off to sleep.

It will be seen that while all of the advantages of a cradle may be obtained with the present bed, the disadvantages of a cradle are eliminated. It will be noted that the mattress support 30 is rigidly supported by the track-

ways **26** at four rectangular raised points and that there is no possibility of a child standing or otherwise disposed within the bed **10** tilting the bed so as to permit the child to fall out of the bed.

While the bed **10** has been illustrated and described as being of the drop-side type, it will be understood that the invention is not so limited. If desired, the invention may be utilized on all types of beds in which children or other persons who require a slight shaking to induce sleep may sleep. Also, the invention may be utilized in doll beds and the like.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claim.

What is claimed as new is as follows:

A bed comprising a head frame, a foot frame, and sides, transverse supports carried by the head and foot frames below said sides, tracks extending between said head and foot frames parallel with said sides with ends resting on said supports, a mattress supporting frame shorter than the distance between said head and foot frames and reciprocating on said tracks below said sides longitudinally of said sides, a bracket extending horizontally outwardly of the foot frame and fixed on the support carried by the foot frame, an upstanding vertically swingable lever pivoted in said bracket outwardly of the foot frame, and a link pivoted to said lever and to the mattress supporting frame and extending through the foot frame.

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