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A. BROWN

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MECHANICAL GLIDER

Filed Aug. 23, 1930

Fig. 1.

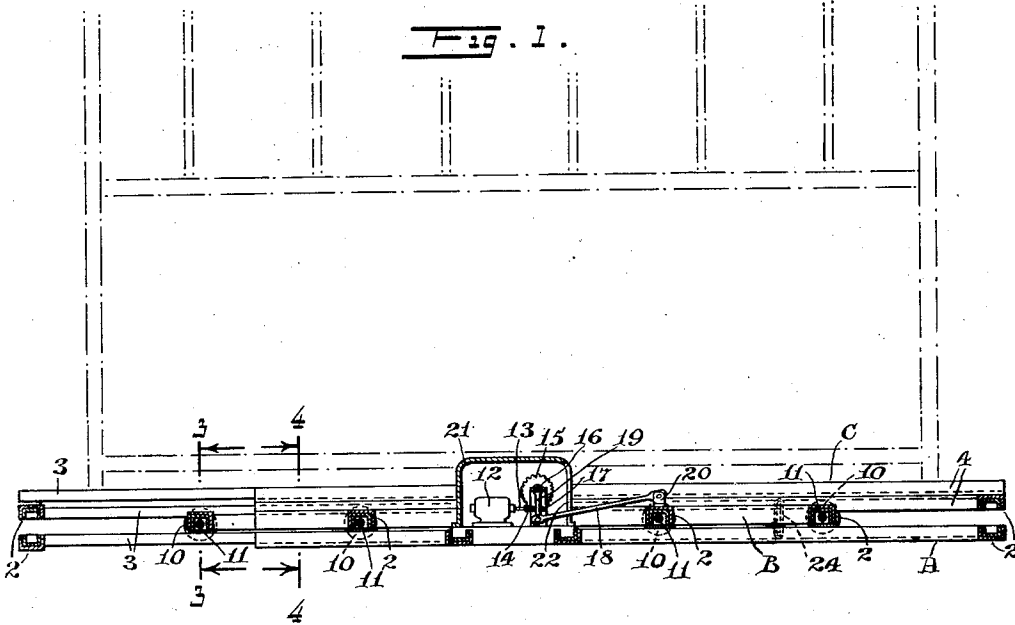


Fig. 2.

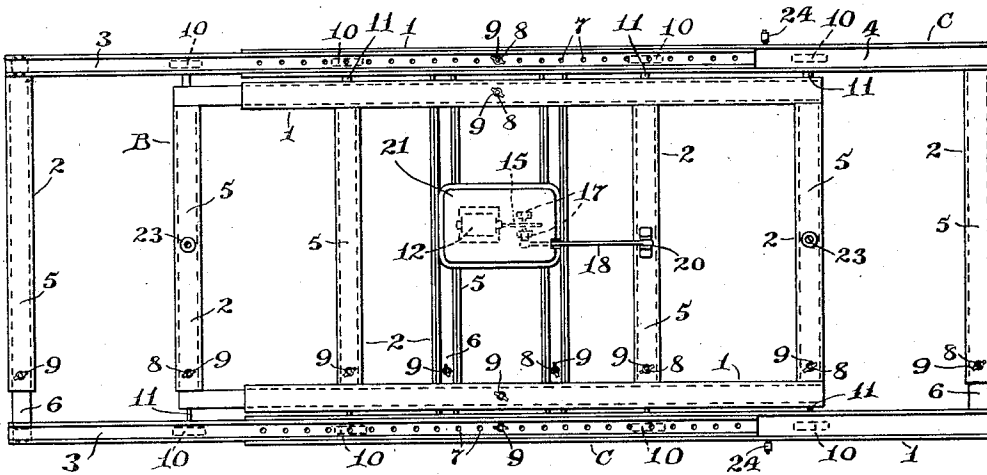
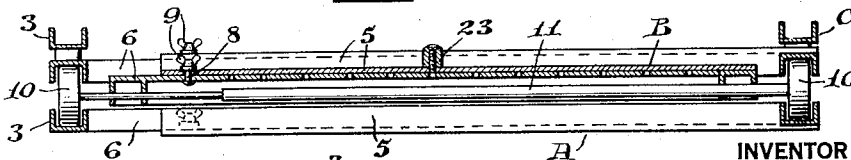


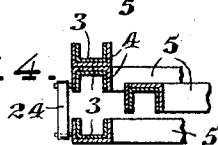
Fig. 3.



WITNESSES

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Fig. 4.



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MECHANICAL GLIDER

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This invention relates to mechanical gliders, an object of the invention being to provide a power-driven glider on which a crib, baby carriage, chair, couch or any other article may be supported and to which a reciprocating gliding movement may be imparted.

It is a further object of my invention to provide a glider which will cause the gliding movements to be smooth and free of jarring action, so that the object on the glider will smoothly and easily change its direction of motion without disturbing the person supported thereon.

An apparatus of this character has many advantages some of which may be enumerated as follows:

A person resting either in an upright or an inclining position is slowly moved backwardly and forwardly without jar, so that a soothing, restful motion is imparted to soothe the nerves and to induce sleep. The motion also tends to assist peristalsis of the bowels of the infant or patient so as to assist an evacuation.

The machine is harmless and so arranged by a friction action that there is no danger of contusion, laceration or abrasion of serious nature.

A machine for producing a soothing state of restfulness in infants, adults and aged by a rhythmic gliding motion, thereby producing a state in the human body conducive to relaxation, rest, sleep and the smooth gliding motion by its gentle movement assisting digestion and elimination, contributing toward a condition of well being and good health.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, all of which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a view in longitudinal section through the center of my improved glider, showing in dot and dash lines the position of the glider;

Figure 2 is a plan view of the device;

Figure 3 is a view in transverse section on the line 3—3 of Figure 1; and

Figure 4 is a fragmentary view in transverse section on the line 4—4 of Figure 1.

My improved mechanical glider comprises three frames which are indicated generally by the reference characters A, B and C respectively. The frame A constitutes a base, the frame B constitutes a reciprocating member, and the frame C constitutes a supporting member for a crib, chair or other device and to which a gliding or reciprocating motion is imparted.

All of the frames A, B and C are preferably, although not necessarily, composed of longitudinal and transverse channel-shaped members 1 and 2 respectively, and I employ these reference characters 1 and 2 to indicate the longitudinal and transverse members of all the frames so as to avoid a multiplicity of reference characters.

All of the longitudinal members 1 and 2 and all of the frames A, B and C are made preferably each of two telescoping members. The sections of the longitudinal members 1 are given reference characters 3 and 4 respectively, and the sections of the transverse members 2 are given reference characters 5 and 6 respectively.

The telescoping sections 3 and 6 are each formed with a longitudinal series of openings 7 for the reception of clamping bolts 8, which latter are projected through openings in the members 4 and 5 respectively, and wing nuts 9 are preferably employed and are screwed on the bolts 8 to clamp the frame members in any position of adjustment.

The channeled longitudinal members 1 of the frame A and certain of the channel members 1 of the frame C face each other; that is, the flanges of the side members of the frame A extend upwardly and the flanges of the side members of the frame C extend downwardly, so that they provide facing tracks for the reception of wheels or rollers 10 connected to telescoping shafts 11 which are mounted in the frame B. The wheels may be rubber tired and are of such diameter that they constitute the sole support of the frame C, so that when the frame B is reciprocated the

wheels or rollers 10 ride upon the side rails of frame A and impart a longitudinal movement to the frame C.

As a means for transmitting a reciprocating motion to the frame B I employ a motor 12 mounted on the base frame A and transmitting motion through the medium of a motor shaft 13 with a worm gear 14 thereon meshing with a worm wheel 15 on a crank shaft 16. This crank shaft 16 is supported in suitable brackets 17 and a connecting rod 18 connects the crank 19 of said shaft 15 with a bracket 20 on the frame B, the connection between the rod 18 and the rod 20 being a pivotal connection so that when the crank shaft is turned a reciprocating motion will be imparted to the frame B. A casing 21 may be provided to enclose the motor 12 and other adjacent parts, as clearly illustrated in Figures 1 and 2 of the drawings, said casing being provided with a slot 22 through which the rod 18 projects.

The frame B may have any desired number of rollers 10 and it will be understood that the rollers 10 support the frame B but are supported by the frame A, and in turn support the frame C and impart a reciprocating movement to the latter. By reason of this means of transmitting a reciprocating movement to the supporting frame C, the movement in one direction comes slowly to an end and slowly starts in the opposite direction without any appreciable jar to the person supported on the device, and eliminating danger of abrasion, contusion or injury.

In order to prevent accidental displacement and ensure a proper operation at all times, cushion blocks 23 are secured on the frame B and are engaged by end transverse members of the frame C, in the event that said frame moves to a position which otherwise might cause the frame C to ride off the rails 10. It is, of course, to be understood that these cushions or bumpers 23 do not come into operation unless there be an over-movement of the frame C in either direction and are merely to prevent possibility of accidental displacement, or to produce slight jar desirable in special cases.

The frames A and C are connected by resilient members, such as rubber bands 24 or the like. These bands may be positioned around pins on the respective frames so that they serve as a shock absorber for lessening the jar of the supporting frame at the ends of its throw and ensure a proper return movement. Of course, I do not wish to limit myself to the exact position of the resilient means, or the employment of rubber bands as other resilient means, such as springs or the like, may be employed.

If desired, the intermediate frame may be operated by any means other than the motor so the device will be adapted for uses other than those specified.

While I have illustrated what I believe to be the preferred embodiment of my invention, it is to be distinctly understood that various slight changes may be made with regard to the form and arrangement of parts without departing from my invention, and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claims.

What I claim is:

1. A mechanical glider including a base frame having rails thereon, a supporting frame positioned above the base frame and having rails thereon, an intermediate frame between the first mentioned frames and adapted to be reciprocated, wheels or rollers carried by the intermediate frame and contacting with the rails of both of the first-mentioned frames, and means carried by the base frame for causing reciprocation of the intermediate frame and likewise the supporting frame.

2. A mechanical glider including a base frame having rails thereon, a supporting frame positioned above the base frame and having rails therein, an intermediate frame between the first-mentioned frames and adapted to be reciprocated, wheels or rollers carried by the intermediate frame and contacting with the rails of both of the first-mentioned frames, a motor mounted on the base frame, a crank shaft turned by the motor, and a connecting rod connecting the rod of the crank shaft and the intermediate frame.

3. A mechanical glider including a base frame having rails thereon, a supporting frame positioned above the base frame and having rails thereon, an intermediate frame between the first-mentioned frames and adapted to be reciprocated, and wheels or rollers carried by the intermediate frame and contacting with the rails of both of the first-mentioned frames, said rails comprising facing channeled bars.

4. A mechanical glider including a base frame having rails thereon, a supporting frame positioned above the base frame and having rails thereon, an intermediate frame between the first-mentioned frames and adapted to be reciprocated, wheels or rollers carried by the intermediate frame and contacting with the rails of both of the first-mentioned frames, all of said frames composed of longitudinal and transverse connected bars and each of said bars consisting of telescoping members, and means for locking the members in various positions of adjustment.

5. A mechanical glider including a base frame, a wheeled reciprocating frame mounted to move on the base frame, and a supporting frame adapted to receive an article thereon and resting on the wheels of said wheeled

frame, and having friction engagement therewith whereby the turning movement of the wheels imparts a reciprocating movement to the supporting frame and the article supported thereon, and means for causing reciprocation of the second frame.

6. A mechanical glider including a supporting frame, wheels on the supporting frame and carrying the supporting frame, means for rotating the wheels in one direction and for reversing the direction of rotation of the wheels so that the supporting frame will be moved back and forth in a limited space, a second frame frictionally resting on the wheels so that the second frame will have imparted thereto a reciprocating movement similar to but of a greater degree than the supporting frame.

Signed at New York city in the county of New York and State of New York this 21st day of August, A. D. 1930.

ALEXANDER BROWN.