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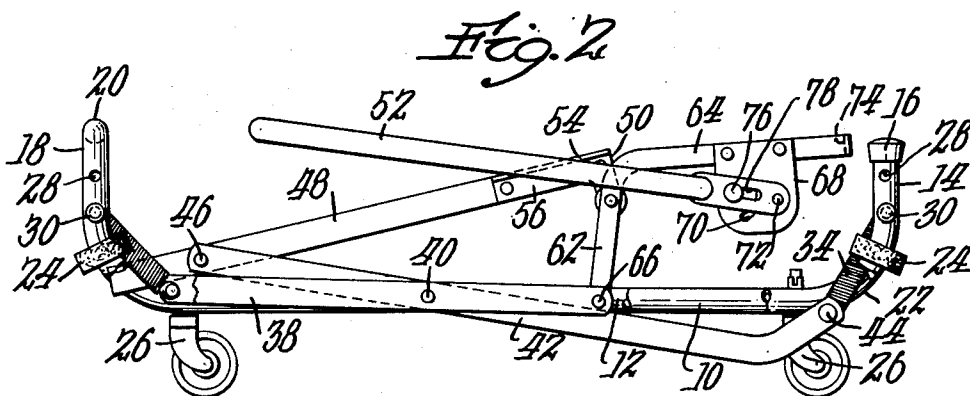
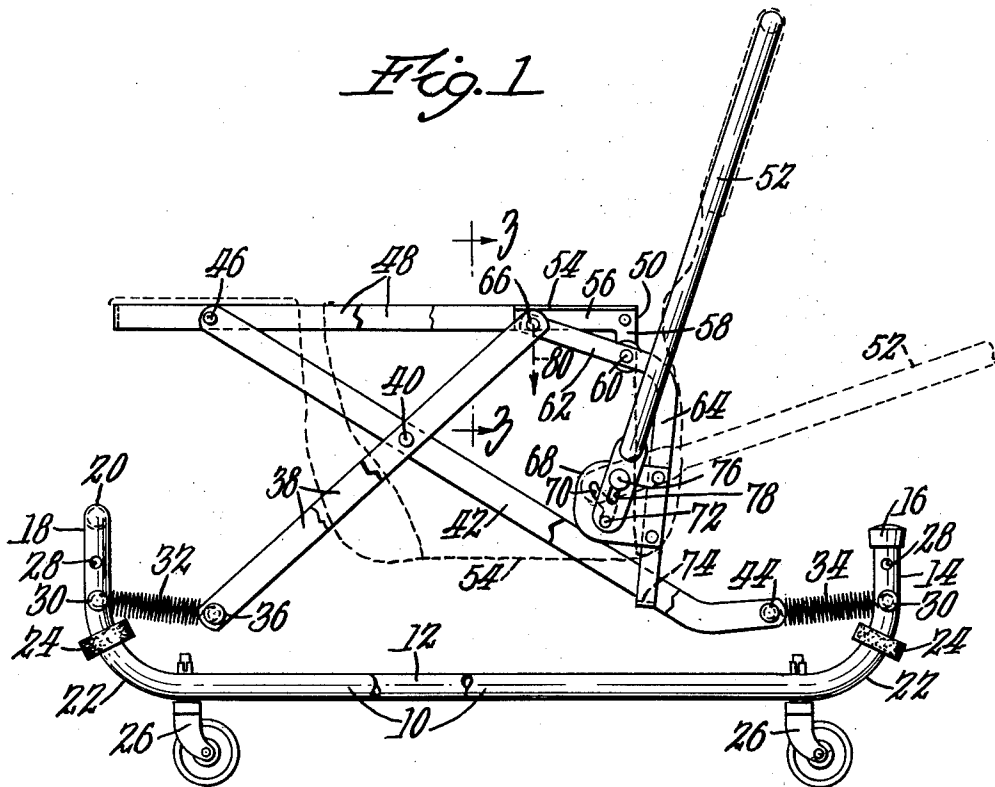
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INFANT'S WALKER AND BOUNCER

Filed Dec. 11, 1963

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3

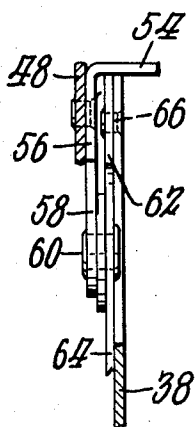
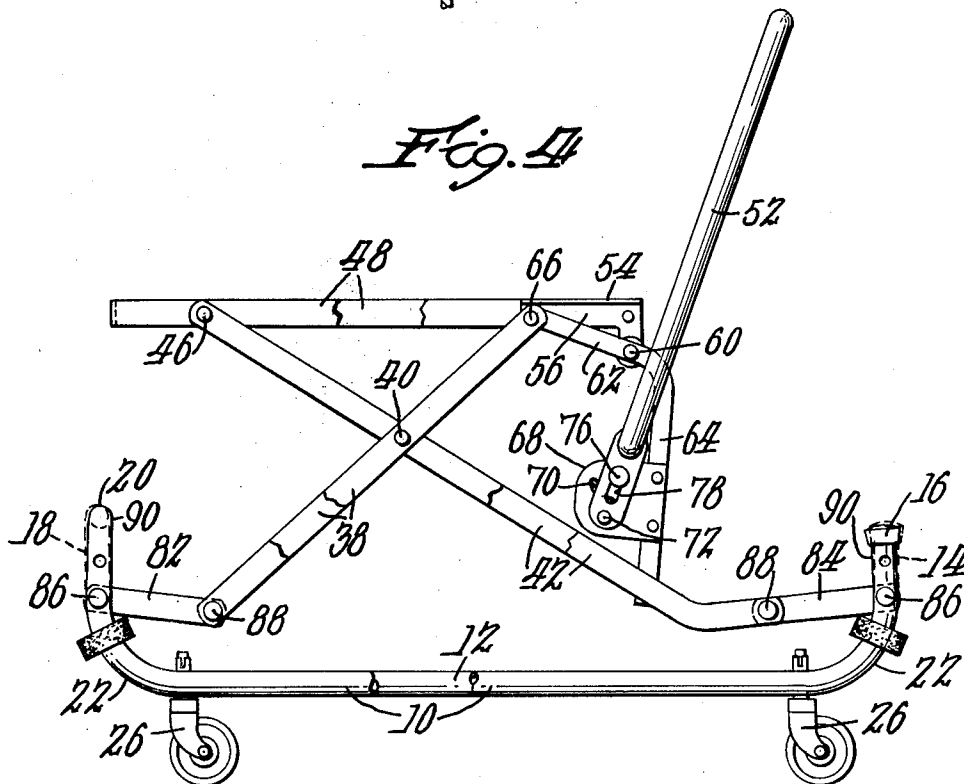


Fig. 4



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INFANT'S WALKER AND BOUNCER

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This invention relates to a new and improved infant's exercising device in the nature of a bouncer and walker, the general features of which are well known in the art. The principal object of the present invention resides in the provision of greatly improved means for folding the device, particularly with reference to a backrest which is foldable relative to a main frame.

A further object of the invention resides in the provision of new and improved means for folding the device as above stated, said means including a past dead center arrangement of interpivotated parts which are so arranged that tension is imposed upon the same tending to hold them in extended condition, but at the same time making it easy for the operator to merely push forwardly as for instance on the backrest and force the parts to the other side of the dead center enabling the backrest to be quickly and easily folded without the use of any latches or catches in the construction. A further object of the invention resides in the combination of parts described above with adjusting means for the backrest so that in spite of the fact that a past dead center construction is provided which includes the backrest as a part, nevertheless the backrest may be adjustably arranged at various angles of inclination relative to the frame for the convenience of the occupant and including a horizontal position so that the infant may lie on his back in the device, or alternatively the back rest may be set in a general upright condition where the infant can use the device for a seat or for walking while contained within the frame of the device in the usual manner of baby walkers.

A further object of the invention resides in the provision of a past dead center means holding the device in extended condition for use and including means applying spring tension to the past dead center linkages holding the same in extended condition, but still allowing quick and easy folding against the action of the spring tension, past the dead center into a position where the spring action is released, with the parts folded.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings, in which:

FIG. 1 is a view in side elevation showing the device in extended condition for use and with the backrest upright, parts being broken away for clarity of illustration;

FIG. 2 is a similar view but showing the device substantially folded;

FIG. 3 is a section on line 3—3 of FIG. 1, and

FIG. 4 is a view illustrating a modification.

In illustrating the invention, it will be seen that the main frame of the device comprises a horizontal, open-ended, U-shaped frame including a pair of side runs 10 and 12 which are spaced and parallel forming the arms of the U. These arms at their free ends 14 at the rear of the bouncer-walker, extend upwardly and terminate, being provided with protective caps or the like 16 if desired. At the closed forward end of the U, the runs 10 and 12 also extend upwardly as at 18 and are joined by a cross member 20 which forms the closed end of the U. The members 10, 12, 14, 18 and 20 can all be made of a single bent member such as tubular steel or the like and at the bent portions of the legs 10 and 12 indicated at 22, 22 relatively soft annular bumpers may be provided as indicated at 24.

Detachable casters 26 can be utilized mounted adjacent the ends of the side run members 10 and 12 for use of the device as a walker, but when it is desired to be used as a bouncer, these casters are easily removed and the bumpers 24 can be repositioned at approximately the points of attachment of the casters to provide friction and non-marring devices for the bouncer.

As shown in FIGS. 1 and 2 the vertically extending portions of the runs 10 and 12 as at 14 and 18 are provided with apertures 28, 28, and another pair of vertically spaced apertures obscured by the fasteners 30, 30 are also provided. To these fasteners are attached coil springs 32, 34, it being understood of course that there are four of these coil springs, one adjacent each corner of the device, springs 32 at the front end 34 at the rear. Fasteners 30 may be inserted in holes 28 to raise the seat.

The forward coil springs 32 are provided with end hooks for attachment to bolts or rivets 36 at the forward ends of a pair of forward scissor members which are indicated at 38, 38. These scissor members extend to the rear and generally upwardly in FIG. 1, but are substantially horizontal as shown in FIG. 2. Intermediate the ends thereof they are interpivotated at 40 with relation to crossing, rear scissor members 42, 42 which extend upwardly from the rear springs 34, being interconnected thereto as at 44. This forms a pair of spaced but generally parallel extendible scissor members one at each side of the device. Supported at the forward ends of the rear scissor members 42 as at 46 there is an open frame or the like 48 which forms an enclosure for the infant and also a support for a forward tray as is usual. The frame 48 is in general U-shape and is open at its rear end as at 50 in FIG. 1, allowing access for the occupant of the frame to the backrest member 52. An appropriate flexible seat support member 54 is provided and this is shown in dotted lines so as not to interfere with the description of the main parts of the frame comprising the invention.

At the rear or open end of each leg of the frame 48 there is provided a stop member 54 which comprises a lateral flange on a plate 56 attached to the legs of frame 48. Each plate 56 extends downwardly at its rear end as at 58 and pivotally mounts at 60 a lever in the form of a bell crank which has an arm 62 and another arm 64. The arms 64 are substantially vertical as shown in FIG. 1 and substantially horizontal as shown in FIG. 2.

The forward end of each arm 62 is interpivotated as at 66 with respect to the rear end of the respective rearwardly extending scissor member 38, it being understood that members 38 are not directly connected with respect to the frame 48. The backrest 52 is interpivotated with respect to adjustment plates 68 on arms 64, these plates being provided with notches as at 70 for positioning lugs 72 at the lower end of the backrest member 52 to hold the latter either upright as shown in solid lines in FIG. 1 or substantially horizontal as shown in dotted lines. Of course other slots may be provided to hold the backrest member at any desired inclination. The arms 64 of the bell cranks are interconnected at their lower ends by a cross brace 74, and lugs 76 operate in slots 78 to cooperate with lugs 72 and slots 70 to hold the backrest in desired position relative to arms 64. It is to be understood of course that the linkages shown in FIG. 1 are duplicated at the opposite side of the device.

With the parts extended for operation as shown in FIG. 1, it will be seen that the springs 32, 34 are tensioned and tend to cause the connected end of member 38 and arm 62 to bear on the stop 54, which limits this action. A line between pivot point 40 and pivot point 60 lies well below the pivot point 66 in FIG. 1 and therefore it is seen that the springs actually hold the parts in the extended condition. With an occupant, this action

3

is made even surer because of the weight imposed on the seat 54 and the infant's pressure on the backrest 52.

In order to fold the device it is merely necessary to push forwardly on the backrest 52 at its top. This stretches the springs 32, 34 a little further and causes the bell crank to move in the same direction, until the pivot point at 60 rises relatively above the line between pivot points 40 and 66. Continued motion on the backrest in a counterclockwise direction causes lever arm 64 to continue to move in a counterclockwise direction and this causes arms 62, 62 to move likewise, bringing pivot point 66 downwardly as shown by the arrow 80 in FIG. 1. When this action is continued to its limit, the parts will appear as in FIG. 2, and the springs are free of any tension imposed thereon.

As shown in FIG. 4 it is possible to use rigid shackles in place of the springs 32. In FIG. 4 the parts are numbered the same for clarity of illustration as they are in FIG. 1 except that the springs 32 and 34 now have substituted for them rigid links 82 and 84 which however are pivoted at their ends for instance at 86 to the respective upright portions 14 and 18 of the under frame, and also to the ends of the scissor members 38 and 42 at 88. In this case the spring tension is derived from a slight inward motion from the upright ends 14 and 18 as shown in dotted lines at 90 rather than from the coil springs 32 and 34, but otherwise the action is the same. The coil spring construction of FIG. 1 is the preferred embodiment of the invention as the embodiment in FIG. 4 is a little harder to operate.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. A walker-bouncer for infants comprising a lower frame including a pair of spaced parallel side members, an upper frame including a pair of spaced parallel side members, said members all extending fore-and-aft of the walker-bouncer, and upturned end portions on the lower frame members, two pairs of spaced parallel crossed scissor members, each pair of scissor members being interpivotated intermediate the respective ends thereof, corresponding ends of said scissor members being mounted on the upturned ends of said under frame, one scissor member of each pair pivotally mounting the upper frame members at the forward ends thereof, the other scissor member of each pair extending

4

in a direction toward the rear ends of said upper frame members and terminating in an upper end unconnected with respect to the upper frame members,

a pair of bell-crank levers pivoted intermediate their ends at each side of said upper frame adjacent the rear end thereof, each lever being pivoted at one end to the upper end of said other scissor frame member that is unconnected to the upper frame members,

a backrest member mounted on the levers adjacent the ends thereof remote from the scissor frame members, and being movable with the levers, said backrest member being adapted to cause pivotal motion of said levers causing the pivot axis between the levers and the said other scissor frame members to be moved selectively from one side to the other of a line connecting the interpivotated axis of the scissor members to the pivot axis of said levers on the upper frame, in one position holding the scissor members extended and the upper frame elevated from the lower frame, but when moved to the other side of the said line providing folding of the scissor members and close approach of the frames, and means limiting the extent of motion of said levers in a direction to hold the scissor members extended.

2. The device of claim 1 including spring means on the lower frame supporting the scissor members, said spring means being tensioned by the scissor members in extended condition of the latter.

3. The device of claim 1 including coil springs on the lower frame supporting the scissor members, said spring means being tensioned by the scissor members in extended condition of the latter.

4. The device of claim 1 including spring means supporting the scissor members, said spring means being tensioned by the scissor members in extended condition of the latter, said spring means comprising the upturned end portions of the under frame.

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