

Feb. 24, 1970

L. R. HILL

3,497,258

ROCKING TOY FOR CHILDREN

Filed June 6, 1966

2 Sheets-Sheet 1

FIG. 1

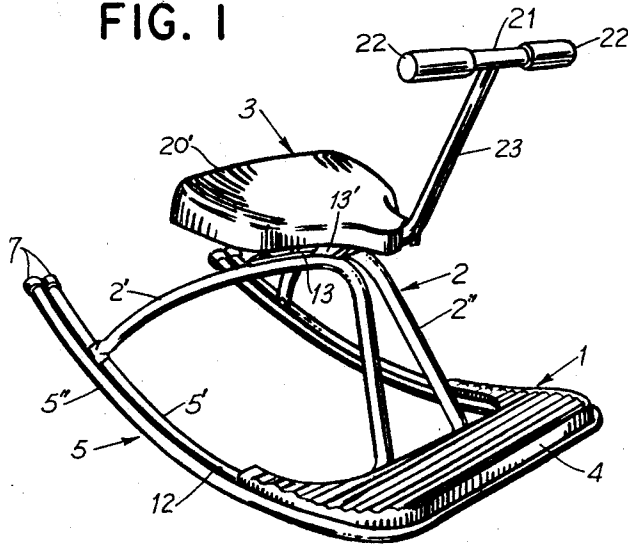
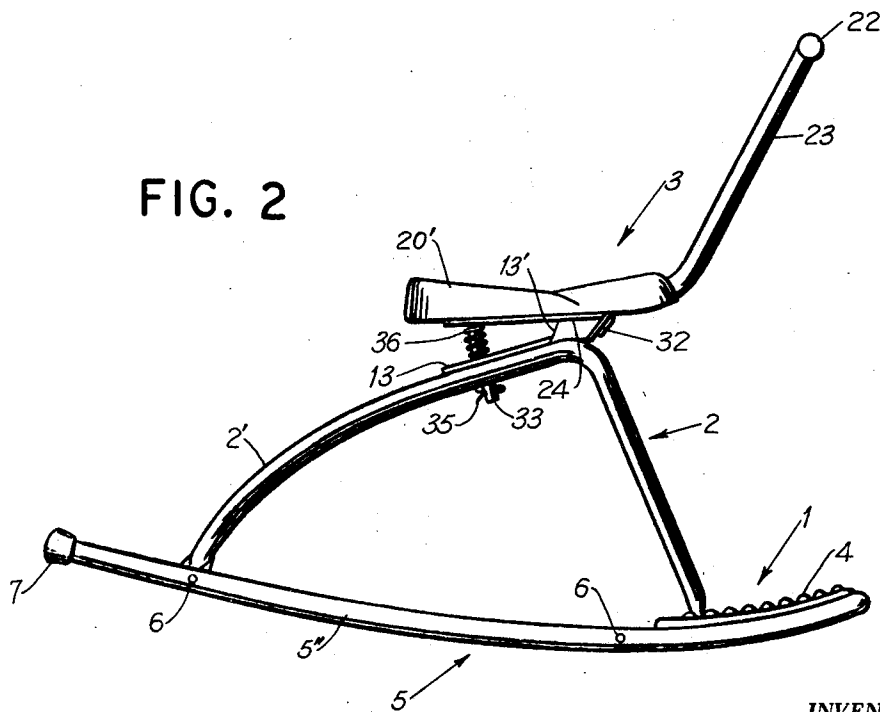


FIG. 2



INVENTOR.
LORAN R. HILL

BY

Kalter Lewis
ATTORNEY

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L. R. HILL

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2 Sheets-Sheet 2

FIG. 3

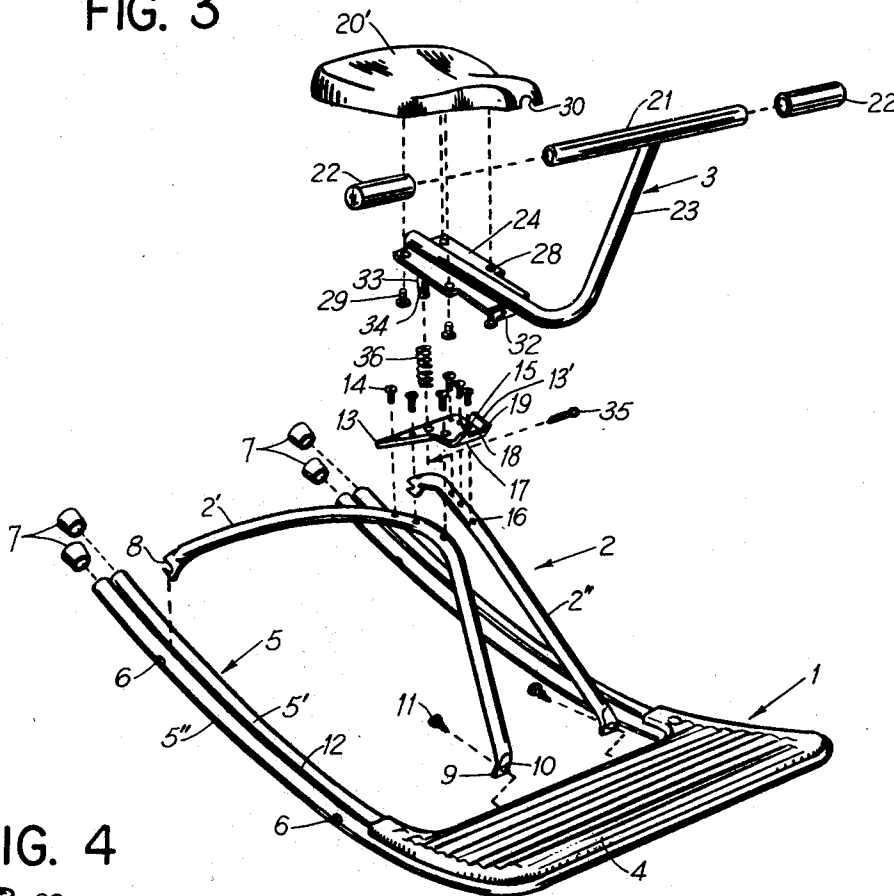
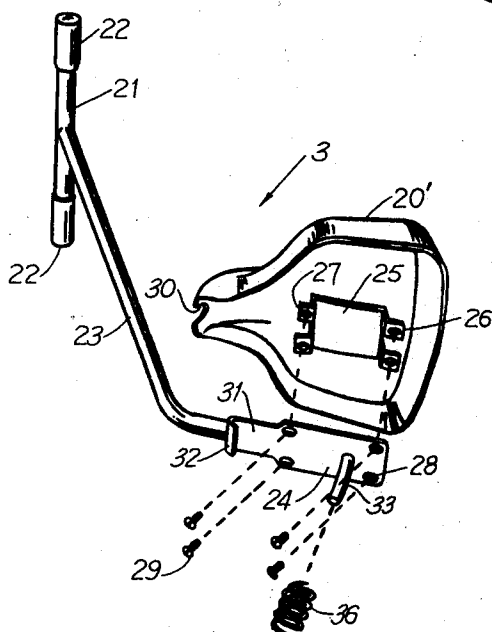


FIG. 4



INVENTOR.
LORAN R. HILL

BY

Kalter Lewis
ATTORNEY

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ROCKING TOY FOR CHILDREN

Loran R. Hill, Richland, Ill., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed June 6, 1968, Ser. No. 735,071

Int. Cl. A47c 13/10

U.S. Cl. 297—183

10 Claims

ABSTRACT OF THE DISCLOSURE

The curved rocker base has a seat support subassembly which supports a spring loaded and pivotally mounted seat and handle bar subassembly which gives the child a bouncing sensation in addition to rocking motion. The seat support subassembly is removably connected to the rocker base and the seat and handle bar subassembly to provide a knock-down construction to conserve on shipping space and cost while still providing easy assembly by the purchaser.

This invention relates to a rocking toy for children, and more particularly, to an improved rocking toy for children having a knock-down construction and providing bouncing and rocking motion.

It is an object of this invention to provide an improved rocking toy for children which is low cost, sturdy, safe, compact, and easy to assemble.

It is a further object of the invention to provide an improved rocking toy for children which will give the child a bouncing or jumping sensation in addition to rocking motion.

It is a still further object of the invention to provide an improved rocking toy for children which can be readily dismantled and assembled to conserve on packaging, shipping, and storage space.

Briefly, a preferred form of the invention employs a metallic tubular construction in rocker base, seat support, and seat and handle bar subassemblies to provide a rocking toy which is low cost yet sturdy. These subassemblies are removably connected to each so that the toy can be shipped or stored in a knock-down condition, yet they are readily assembled together by the purchaser or parent. The rocker base has a moderate curvature and a foot rest or platform; and the seat has a handle bar which the child can hold on to while rocking back and forth. The seat is mounted on the rocker base by the seat support and has a spring loaded pivotal connection to the seat support. Therefore, as the child rocks back and forth on the toy a bouncing or jumping sensation is obtained in addition to the conventional rocking motion.

The invention will now be more particularly described in connection with the following drawings, in which:

FIG. 1 is a perspective view of a preferred form of the invention;

FIG. 2 is a side elevation view of the rocking toy shown in FIG. 1.

FIG. 3 is an enlarged perspective view similar to that of FIG. 1 but showing the parts thereof in exploded position to better show the details thereof; and

FIG. 4 is an exploded perspective view of just the seat and handle bar subassembly of the toy.

Referring now first to FIGS. 1 and 2 of the drawings, the toy comprises three main subassemblies of a curved rocker base 1, and seat support 2, and a seat and handle bar subassembly 3. The base 1 will be described first.

Base 1 has a foot pad, rest, or platform 4, and a pair of moderately curved and spaced apart floor engaging

rocker elements, legs, or runners 5. The runners 5 actually comprise two U-shaped metallic tubular elements 5' and 5''. The inner one 5', is slightly shorter than and positioned within the outer one 5''. They are connected together along their sides by means such as rivets 6. Inasmuch as U-shaped element 5' is shorter than the U-shaped element 5'', there is a not shown space provided between their front portions. This space is spanned by the foot rest 4, which is corrugated so that the feet will not slip thereoff. The foot rest 4 is joined to the riveted together elements 5' and 5'' by suitable means such as welding, into a sturdy rocker base or platform subassembly. Where welding is employed for this purpose the foot rest 4 will be constructed from metal. The rear ends of the U-shaped tubular elements 5' and 5'' are capped by plastic or the like cup shaped elements 7 so that their sharp edges will not scratch a floor surface on which the rocker toy is being used.

Referring now also to FIG. 3, the seat support subassembly 2 will now be described. It comprises a pair of elevated and curved metal tubular elements 2' and 2''. At their rear ends they are provided with rearwardly facing and integrally formed hook shaped portions 8. Hook portions 8 are flat and extend between the tubes 5' and 5'' for hooked engagement with the rear rivets 6. The front ends of the tubes 2' and 2'' have front facing flattened portions 9. Flat portions 9 have holes 10 formed therein. These flat portions are butted up against the inside surface of the bridge portion of the inner U-shaped tube 5'. Screws 11 or the like extend through the holes 10 into not shown aligned holes formed in tube 5' to removably connect the front ends of the seat support 2 to the base 1. The rear of seat support 2 is also removably connected to the base 1 by virtue of the hooks 8. A slight space 12 is provided between the tube elements 5' and 5'' to receive the hooks 8 therebetween. This space 12 is just large enough to receive the hooks 8 so that tube elements 5' and 5'' aren't loose with respect to each other.

The straight line distance between the flats 8 and 10 is slightly longer than that between the point of connection of flat 10 to tube 5' and the rear rivet or tie member 6. In other words, the members 5' and 5'', which have a curved angular shape, as viewed from the side, see FIG. 2, have their ends bent or loaded slightly towards each other for assembly to base 1. This causes the rear ends 8 to be sprung or biased towards the rear rivets 6 so that the hooks 8 do not become disengaged therefrom. Due to the angular shape of the tubes 5' and 5'', when weight is placed on the seat subassembly 3 the legs of members 2' and 2'' have a tendency to be urged apart so that the hooks 8 do not become disengaged from the rivets 6 when the toy is being used.

At their front ends the seat support tubes 2' and 2'' are spaced apart by a distance equal to about 1/4 or 1/3 the distance between the rear ends thereof. The upper apex portions of the seat support tubes 2' and 2'' are spaced apart slightly and are interconnected rigidly by a plate 13 which has the general shape of an isosceles trapezoid. The plate 13 is removably connected to the apex portions of the seat support tubes 2' and 2'' by a series of screws 14 or the like. Screws 14 extend through aligned holes 15 and 16 formed in plate 13 and tubes 2', 2'', respectively.

At its front end the plate 13 has a slightly upturned integral tab 17 formed thereon. The front top edge of tab 17 has a horizontally formed notch or cutout 18 formed therein. The opposite ends of notch 18 are defined by lugs 19 which are integrally formed on the plate 13. At its rear end the plate 13 is provided with a centrally disposed guide hole or opening 20. These parts

17-20 of the plate 13 are for the purpose of removably, pivotally and resiliently mounting the seat subassembly 3 on the seat support subassembly 2 in a manner which will be described hereinafter. The plate 13 also has a pair of upstanding side elements or wings 13' integrally formed thereon. Parts 13' provide a safety feature which will be better understood after a description of the seat subassembly 3.

The parts of seat subassembly 3 will now be described by referring also to FIG. 4. Seat subassembly has a seat 20' and a handle or hand grip bar 21. Bar 21 is horizontally disposed and its opposite ends are capped by plastic or the like sleeve hand grips 22. Handle 21 is connected by welding or the like to the upper end of an obtuse angle shaped tube 23. The front half of tube 23 is generally upright, and its rear half is generally horizontal. The rear half is superposed on a handle bar-to-seat connecting plate 24. Tube 23 and plate 24 are rigidly connected together by welding or the like. Another handle bar-to-seat connecting plate 25 is positioned centrally against the underside of seat 20'. If seat 20' is constructed from metal then these two parts are connected together by welding. Seat connected plate 25 has four integrally formed and spaced depending ears 26 formed at the four corners thereof. These ears 26 and handle bar plate 24 have aligned holes 27 and 28 respectively, formed therein. Screws 29 or the like extend up through holes 28 into the holes 27 to connect the handle 21-23 to seat 20'. The front end of seat 20' has a notch or cut-out 30 formed therein which receive the tube 23 along its central curved portion and the rear of tube 23 extends between the ears 26 in alignment with the lengthwise axis of the toy.

The lower plate 24 is generally rectangular shaped and it has an integral forwardly extending tongue 31 formed thereon. The outer tip of tongue 31 is bent over underneath itself to form an approximately 30 degree integral pivot hook 32. The holes 28 in plate 24 are formed at the four corners of the main rectangular rear portion thereof. Connected by welding or the like to approximately the center of the main rectangular portion of plate 24 is a short depending curved guide rod 33. Rod 33 can also be welded directly to tube 23 and then passed through an aperture formed in plate 24 at the point where it depends from plate 24. Rod 33 is curved or bowed slightly in a forward direction. The lower end of rod 33 has a through hole 34 formed therein which is adapted to receive a cotter pin 35 or the like. An elongated spiral and compression spring 36 is adapted to be mounted on the rod 33 for compression between the plates 13 and 24. This captive spring 36 provides a resilient pivotal connection between the seat and handle bar subassembly 3 and the seat support subassembly 2.

Subassemblies 2 and 3 are removably connected in the following manner. First spring 36 is slipped on rod 33. Then plate 24 is aligned with plate 13 by engaging hook 32 with notch 18, and then inserting rod 33 into hole 20. With the parts so aligned the seat 20' is pushed down to compress the spring 36 and as soon as the hole 34 appears below the plate 13 the cotter pin 35 is inserted therein and its free ends bent back over on itself to retain the parts assembled together. In other words, pin 35 is a sole means for preventing removable of the seat subassembly 3 from the support subassembly 2. When these two subassemblies are connected together the wings 13' of plate 13 straddle the front part plate 24 along the tongue 31. That is to say, when plate 24 moves down it moves between the spaced wings 13'. Wings 13' prevent a child from inserting its fingers between the front portions of plates 13 and 24 where they would be pinched or injured.

In use of the toy the engaged parts 32, 18 and 33, 20 restrain the plates 24 and 13 from shifting or moving with respect to each other in a lengthwise or sideways direction. That is to say the restrain is total, except in a di-

rection of towards and away from each other to provide a spring biased pivotal movement therebetween. Pivot movement of the seat 20' with respect to the seat support 2 is provided by hooked engagement between parts 32 and 18. The front of plate 24 cannot become disengaged from notch 18 because of the end lugs 19 and positioning of rod 33 in hole 20. However, plate 24 is free to pivot up and down with respect to plate 13 since rod 33 passes freely through plate 13. The pivot radius between seat 20' and seat support 2 is the distance between hook 32 and rod 33. The hook is its pivot center, and the curve or arc of pivotal movement is coincidental with the curvature of rod 33. The seat 20' is spring loaded by the resilient element 36 so as to separate the plates 24 and 13. Therefore, if a down force is applied to seat 20' as soon as it is removed or relieved spring 36 forces the seat 20' up. Thus, if one bounces on the seat 20' there are no sharp impacts on the body since the seat 20' is cushioned by spring 36.

Accordingly, the toy of the instant invention provides an entertaining motion or sensation to the child user in addition to the conventional back and forth rocking motion. For example, if the base 1 is restrained from movement and the child merely bounces or jumps up and down on the seat the child will derive fun or pleasure therefrom since the seat is spring loaded for cushioned pivotal movement. This is a movement which is derived also when the child rocks back and forth on the toy. In rocking back and forth the child's feet are on the foot rest 4 and the hands are gripping the hand grips 22. Alternate rocking back and forth shifts the child's weight first to bear down on the seat when rocking back, and then off the seat when rocking forward, the former being cushioned by compression of the spring. The toy has been found to be especially enjoyable for toddlers or children of pre-school age, but its use is not necessarily restricted to this age group. In addition the toy is low cost and readily fabricated but still sturdy. Low costs and ease of manufacture are possible because of the use of readily fabricated parts such as tubular metallic stock. In addition, the arrangement of the parts is such that the toy can be shipped in unassembled condition but still readily put together by the purchaser. This conserves on shipping carton space, as well as shipping costs, and when the toy is no longer needed the parts can be easily disassembled to store it away in its original carton or some other small storage container.

While there has been shown and described a particular embodiment of the invention, it will be obvious to those skilled in the art that changes and modifications can be made without departing from the spirit of the invention, and therefore, it is intended by the appended claims to cover all such changes and modifications as fall within the true spirit and scope of the invention:

What is claimed is:

1. A rocking toy for children, comprising, a curved rocker base subassembly, a seat support subassembly mounted on said base subassembly, and a seat and handle bar subassembly mounted on said support subassembly, said subassemblies being removably connected together, and said seat and handle bar subassembly comprising a seat pivotally and resiliently mounted on said support subassembly for resilient pivotal up and down movement with respect to said support subassembly, whereby said toy provides a cushioned bouncing and rocking sensation to a user thereof.

2. In a toy as in claim 1, said seat being pivotally and resiliently mounted on said support subassembly by a pair of plates and a compression spring, one of said plates being mounted on said support subassembly, the other of said plates being mounted on the underside of said seat, said seat mounted plate being superposed over said support mounted plate in spaced relationship, said plates being aligned along the lengthwise axis of said toy, a pivotal connection between one of the corresponding

5

ends of said plates, and said compression spring being disposed between said plates.

3. In a toy as in claim 2, said pivotal connection comprising a slot formed in said support mounted plate and an integral hook shaped portion formed on said seat mounted plate, said hook shaped portion being engaged with said slot, and means for guiding said plates in their pivotal movement with respect to each other, said guiding means comprising a guide aperture formed in said support mounted plate and a guide rod depending from said seat mounted plate into said guide aperture.

4. In a toy as in claim 3, said compression spring comprising an elongated spiral spring, said spiral spring being disposed about said guide rod and between said plates, and means at the lower end of said guide rod and beneath said support mounted plate for limiting upward movement of said guide rod in said guide aperture, and a pair of integral side wings formed on said support mounted plate adjacent said pivotal connection, said wings extending from said support mounted plate to alongside the opposite sides of said seat mounted plate to prevent a child from inserting its fingers between said plates in the area of said pivotal connection.

5. In a toy as in claim 1, said curved rocker base subassembly comprising at least one U-shaped tube, said seat support subassembly comprising a pair of angle shaped tubes connected at one of their ends to the bridge portion of said U-shaped tube and at their other ends to the end leg portions of said U-shaped tube, the apex portions of said angle shaped tubes being elevated above said rocker base subassembly, a plate spanning said apex portions, another plate connected to the underside of said seat, said other plate being superposed over said spanning plate in spaced relationship, hinge means pivotally connecting said plates together, a compression spring interposed between said plates, and a tubular handle bar structure connected to said another plate and extending from adjacent said seat to a position located ahead and above said seat.

6. In a toy as in claim 1, said curved rocker base subassembly comprising a first pair of U-shaped tubes, one of said tubes being positioned within the other whereby its bridge portion is spaced behind the bridge portion of the other, tie members extending through said tubes adjacent the opposite ends of the leg portions thereof to unite them together, and said seat support subassembly comprising a second pair of angle shaped tubes, one of the corresponding ends of said second pair of tubes being connected to the bridge portion of one of said first pair of tubes, the other ends of said second pair of tubes having integral hooks formed thereon, said hooks being disposed between said first pair of tubes and being engaged with the tie members remote from said bridge portions, and the apex portions of said second pair of tubes being disposed above said first pair of tubes in elevated position, said apex portions being spaced with respect

6

to each other a plate spanning said apex portions and united them together, and said seat and handle bar subassembly being mounted on said plate.

7. In a rocking toy as in claim 1, said seat support subassembly comprising a pair of angle shaped tubes which are connected to the front and rear of said rocker base subassembly, said tubes being generally upright, a first mounting plate connected to the upper central portions of said tubes to unite them together, a second mounting plate connected to the underside of said seat, said second plate being superposed over said first plate in spaced relationship, both plates being aligned with the lengthwise axis of said rocker base subassembly, a slot formed on the front of said first plate, an integral hook formed on the front of said second plate, said hook being pivotally engaged with said slot, and a compression spring captive between said plates.

8. In a rocking toy as in claim 7, said rocker base subassembly comprising at least one generally U-shaped and curved floor engaging tubular member, and another tubular member connected to said second plate and extending from adjacent said seat to a location ahead and above said seat, and a tubular handle bar connected to the upper end of said another tubular member and extending transversely with respect to the lengthwise axis of said toy.

9. In a rocking toy as in claim 8, the rear of said another tubular member being connected to the upper surface of said second plate beneath said seat, a guide hole in said first plate behind said slot, a guide rod depending from said second plate behind said hook, said guide rod extending into said guide hole, and said compression spring comprising an elongated spiral spring disposed on said guide rod between said two plates.

10. In a rocking toy as in claim 9, a through aperture formed in the lower end of said guide rod beneath said first plate, and a removable pin extending through said through aperture to retain said seat and handle bar subassembly connected to said seat support subassembly, said pin being a sole means preventing removal of said seat and handle bar subassembly from said seat support subassembly.

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JAMES T. McCALL, Primary Examiner

U.S. Cl. X.R.

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