United States Patent [19]

Triska

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[54] **SELF-ROCKING DOLL**

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[52] **U.S. Cl.** **46/116,** 46/15

[51] **Int. Cl.** **A63h 13/00**

[58] **Field of Search** 46/147, 116

[56] **References Cited**

UNITED STATES PATENTS

199,858	1/1878	Pattberg et al.	46/147
697,248	4/1902	Hawley	46/147
3,728,816	4/1973	Ensmann et al.	46/116

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[57] **ABSTRACT**

A self-rocking doll in a rocking chair including a flexible attachment means between the doll and rocking chair, a motor mechanism, an operating lever interconnecting the motor mechanism and doll, said operating lever being actuable by the motor mechanism to thereby effect back and forth movement of the doll and consequent rocking of rocking chair.

6 Claims, 7 Drawing Figures

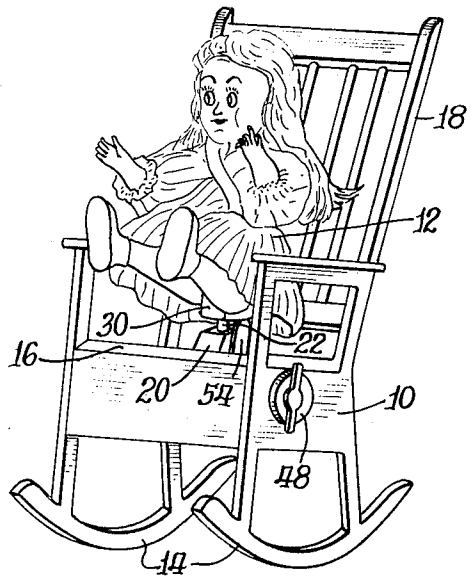


Fig. 1.

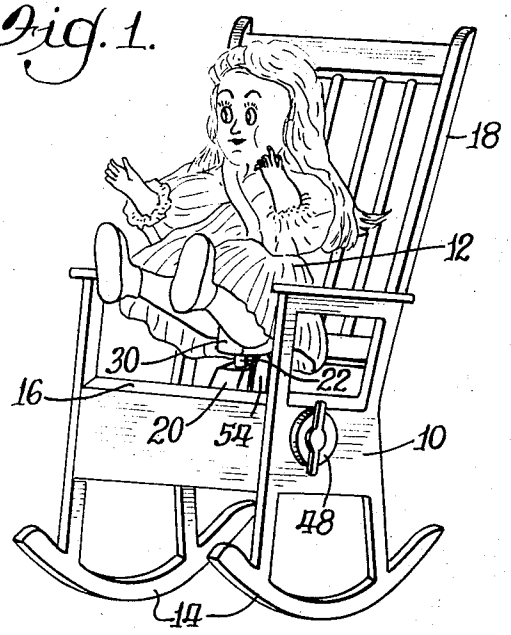


Fig. 2.

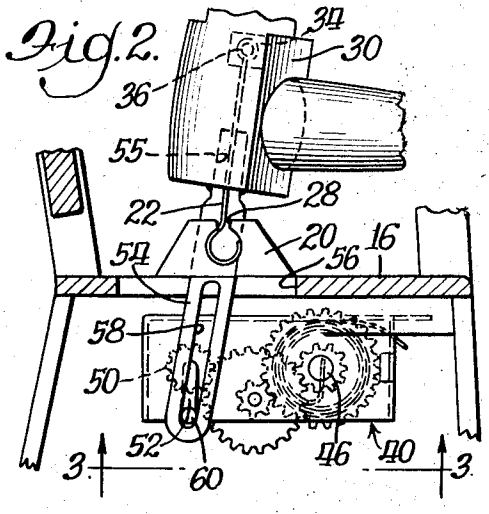


Fig. 3.

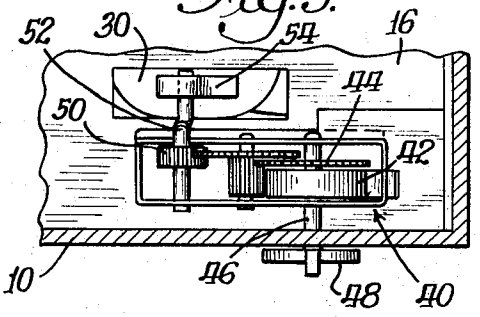


Fig. 4.

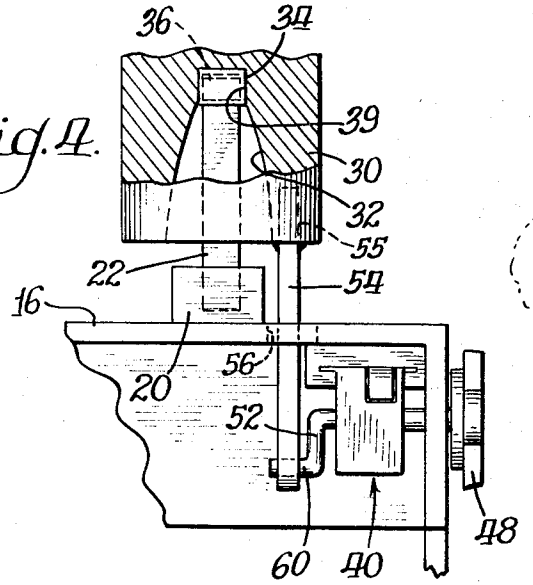


Fig. 5.

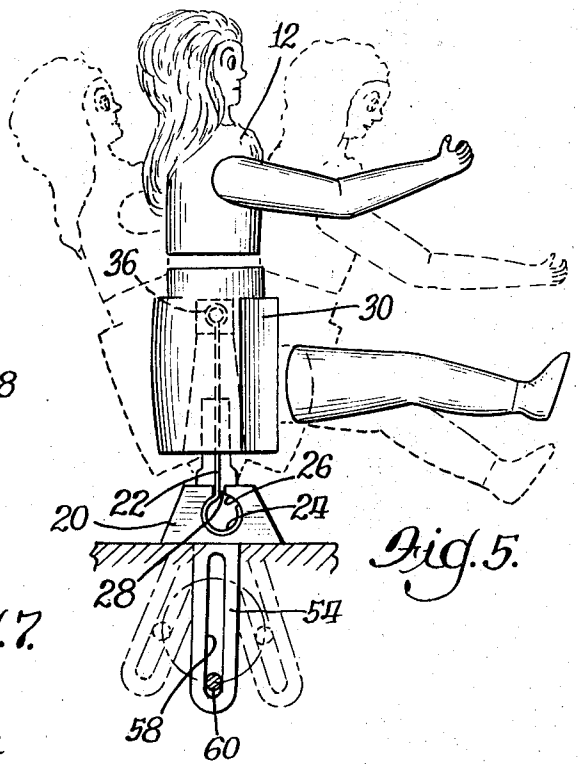


Fig. 6.

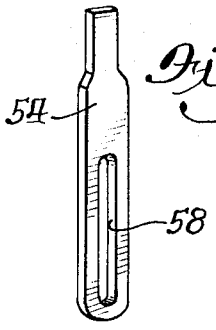
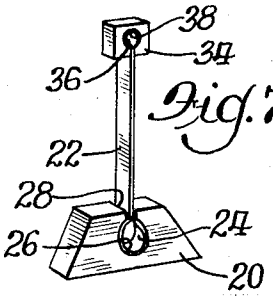


Fig. 7.



SELF-ROCKING DOLL

This invention relates to a self-rocking doll toy.

Briefly summarized the invention herein includes a rocking chair mounted doll, the movement of which can be actuated by the release of a windable spring motor. When the spring motor is released, the doll is caused to move back and forth which movement in turn causes a rocking motion in the rocking chair. The mechanism includes a rocking chair, a doll supported in a rocking chair, a leaf spring means for supporting the doll in the rocking chair, a windable spring motor mounted on the underside of the rocking chair and a lever connected to the doll and actuated by the spring motor whereby rocking movement of the doll and rocking chair is effected.

An object of the present invention is to provide a self-rocking doll and rocking chair combination.

It is another object of the invention to provide a combination of a rocking chair, a doll mounted on the rocking chair and a motor mechanism operatively associated with the doll whereby the motor mechanism is capable of effecting back and forth movement of the doll and consequently rocking of the rocking chair.

Another object of the invention is to provide a combination of a rocking chair, a doll mounted on the rocking chair and a windable spring mechansim operatively associated with the doll whereby unwinding of the spring mechanism is capable of effecting back and forth movement of the doll with a resultant rocking of the rocking chair.

Another object of the invention is to provide a flexible connecting means between the doll and the rocking chair to effect automatic rocking of the rocking chair by swaying movement of the doll.

Other objects of the invention will become more apparent when the description is considered in conjunction with the following drawings in which:

FIG. **1** is a front perspective view of the rocking chair and the doll mounted thereon;

FIG. **2** is a left side view in elevation of a portion of the rocking chair and doll showing the spring motor and doll actuating lever attached to the doll body;

FIG. **3** is a view of the underside of the rocking chair showing the spring motor taken along line **3—3** of FIG. **2**;

FIG. **4** is an enlarged partial front view showing the attachment of the doll body to the rocking chair and the actuating lever connected to the doll body and spring motor;

FIG. **5** is a side view showing the relative positions of the doll as it rocks back and forth on its leaf spring support;

FIG. **6** is a view in perspective of the actuating lever interconnecting the spring motor and the doll body.

FIG. **7** is a view in perspective of the leaf spring which mounts the doll body on the rocking chair.

Referring now to the drawings wherein like reference characters refer to similar parts, **10** designates a rocking chair on which is mounted a doll member **12.** The rocking chair includes the normal rockers **14,** a seat portion **16** and a back portion **18.** A boss member **20** is secured to the upper portion of the seat **16** and provides a support for the lower end of a leaf spring **22.** The lower end of the leaf spring **22** may be formed with a bent substantially circular portion **24** which is removably secured in a circular opening **26** in the boss **20.**

The leaf spring then extends through a slot **28** in the upper portion of the boss **20.** The upper end of the leaf spring **22** is attached to the doll body **30.** As seen in FIG. **4,** leaf spring **22** extends into a cavity **32** formed in the doll body and is anchored in a small plug **34** which is positioned in the doll body. The upper end of the leaf spring **22** may be formed in substantially the same way as the lower end; that is, with a substantially circular end **36** which fits into a circular aperture **38** in the plug **34.** The plug **34** is then removably fitted by a tight fit into a recess **39** at the upper end of the cavity **32.** The leaf spring assembly as best seen in FIG. **7** permits easy attachment to the doll body **30.** The leaf spring is of such strength as to permit easy back and forth sway of the doll relative to the rocking chair seat.

The device also includes a motor mechanism for imparting forward and backward motion to the doll. In this particular embodiment I provide a windable spring motor mechanism **40** which is mounted on the underside of the seat **16.** The windable spring motor may be a conventional commercially available mechanism. It includes a coil spring **42,** a gear mechanism **44,** a winding stem **46,** and winding knob **48.** The gear mechanism includes an output gear **50** to which is attached a bell crank **52.** When the spring motor is wound and then released, the bell crank **52** rotates as unwinding of the spring **42** proceeds.

An operating lever **54** is secured in the lower end of the doll body at **55** and extends through an elongated opening **56** in the seat **16.** The operating lever **54** is formed with an elongated slot **58** which is adapted to receive therethrough the arm **60** of the bell crank **52.** Thus the rotation of the bell crank **52** swings the operating lever back and forth in the elongated opening **56** in the seat **16.** This causes back and forth movement of the doll **12** which is attached to the upper end of the operating lever **54.**

Briefly, the operation may be described as follows: In order to set the device for operating the spring motor mechanism **40** is wound to tighten the spring **42.** Upon release of the winding knob **48,** the spring **42** will begin to unwind. In doing so, the gear mechanism **44** is operated and the output gear **50** will be rotated, carrying with it the bell crank **52.** As the bell crank rotates, the arm **60** rides in the slot **58** of the operating lever **54,** thus imparting back and forth motion or pivoting movement to the operating lever **54** and the doll body **30** to which it is connected. Since the doll is also attached to the leaf spring **22,** an extra swinging motion is imparted to the doll. The momentum of this swinging motion then has the effect of making the rocking chair rock. The strength and flexibility of the leaf spring affects the momentum given to the doll and consequently the movement of the rocking chair. The leaf spring, of course, gives added swinging momentum to the doll. As the bell crank **52** continues to rotate and the operating lever **54** continues to move in the opposite direction the doll, of course, also swings in the opposite direction so that consecutive to and fro movements of the doll are effected as shown, for example, in FIG. **5.** The continuing to and fro motion of the doll produces the automatic rocking effect on the rocker and such rocking of the rocking chair will continue until the spring **42** is substantially unwound.

While a preferred embodiment of the invention has been specifically disclosed, it is to be understood that the invention is not limited thereto as other variations

will be apparent to those skilled in the art and the invention is to be given its fullest possible interpretation within the terms of the following claims.

I claim:

1. An automatic rocking doll device comprising:
a rocking chair;
a doll mounted on said rocking chair;
flexible spring means interconnecting said doll and rocking chair for mounting said doll on said rocking chair;
a motor mechanism mounted on said rocking chair;
actuating lever means interconnecting said motor mechanism and said doll whereby actuation of said motor mechanism is effective to cause back and forth movement of said doll and rocking of said rocking chair.

2. The device of claim **1**, wherein
said flexible means comprises a leaf spring, one end of which is operatively connected to said rocking chair and the other end of which is operatively connected to said doll.

3. The device of claim **2**, wherein
said leaf spring is removably attached to both the doll and the rocking chair.

4. The device of claim **1**, wherein
said motor mechanism includes a bell crank, rotatable by said motor mechanism, said lever means includes an elongated slot means, and said bell crank is received in said elongated slot means whereby said lever means is moved back and forth when said bell crank is rotated.

5. The device of claim **1**, wherein
said motor mechanism is a windable spring motor mechanism.

6. An automatic rocking doll device comprising:
a rocking doll having a seat portion;
a doll mounted on said rocking chair;
leaf spring means having one end operatively connected to the rocking chair and the other end to the doll;
a windable coil spring motor mounted on the underside of the seat portion of said rocking chair;
said spring motor including a bell crank rotatable by said spring motor upon release of said spring motor for unwinding;
actuating lever means interconnecting said doll and said bell crank whereby release of said spring motor is effective to move said actuating lever back and forth and thereby cause back and forth movement of said doll which in turn causes rocking of the rocking chair.

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