

No. 664,203.

Patented Dec. 18, 1900.

J. H. WHITING.

MOTOR TOY.

(Application filed May 8, 1900.)

(No Model.)

Fig. 1,

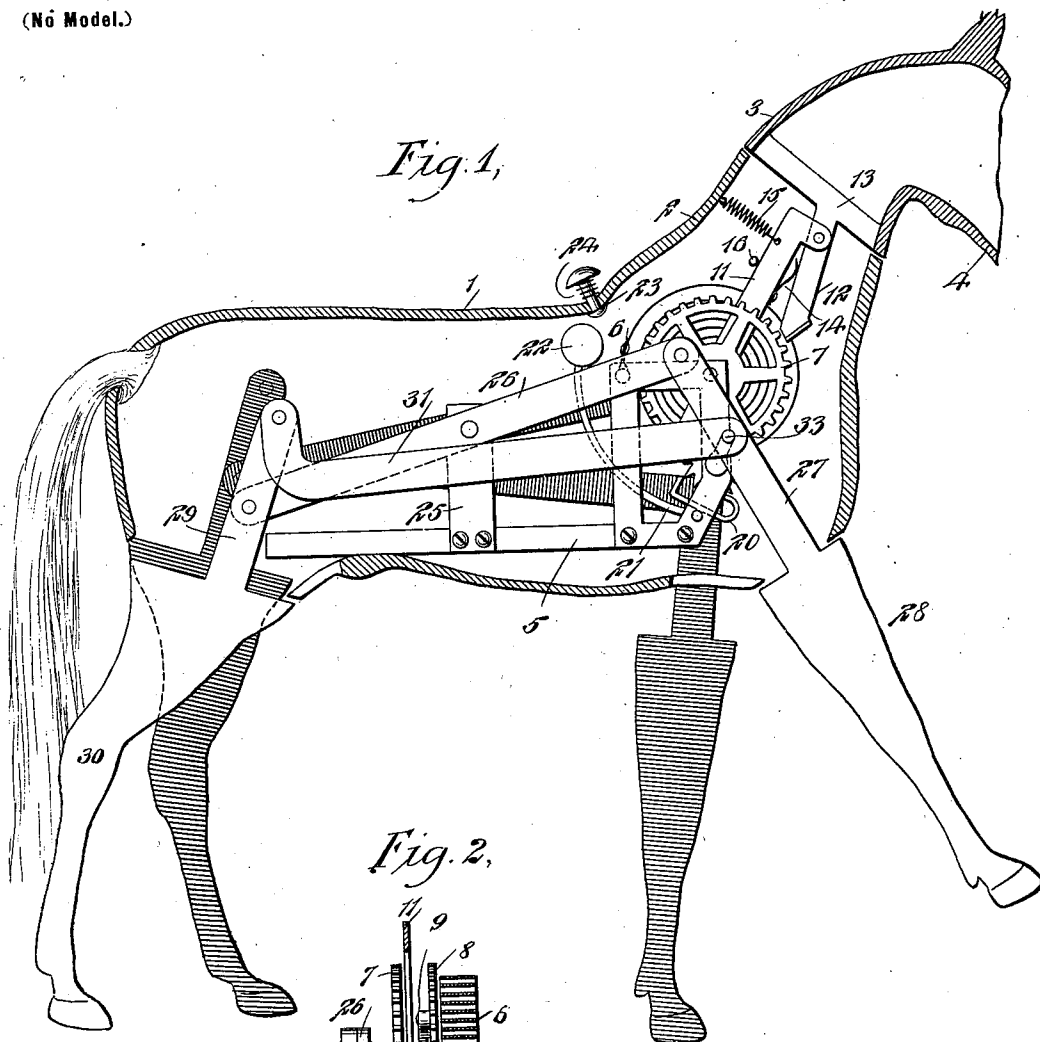
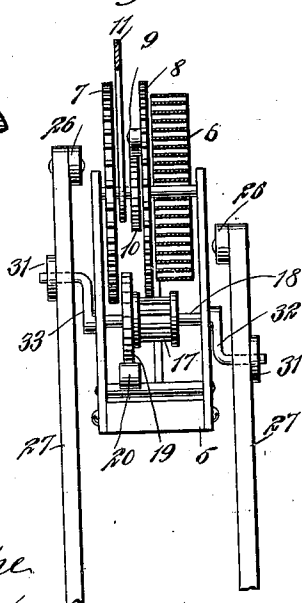


Fig. 2,



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# UNITED STATES PATENT OFFICE.

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## MOTOR TOY.

SPECIFICATION forming part of Letters Patent No. 664,203, dated December 18, 1900.

Application filed May 8, 1900. Serial No. 15,977. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HENRY WHITING, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Motor Toy, of which the following is a full, clear, and exact description.

The invention relates to improvements in toys of the motor or perambulating type; and the object is to provide a toy in the shape of a horse or other animal with a motor and connections for simultaneously operating the legs of a side in opposite directions, causing the animal to walk, and, further, to provide an attachment to the neck of the toy whereby upon a movement of the head and a portion of the neck the motor-spring may be wound.

I will describe a motor toy embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional elevation of a toy embodying my invention, and Fig. 2 is a front elevation of the motor.

Referring to the drawings, 1 designates the body portion of the toy, here shown in the form of a horse and having a neck consisting of two sections 2 3, the section 3 terminating at the head 4. Arranged within the body portion is an arm 5, supporting a motor consisting of a spring 6, on the shaft of which is a winding-gear 7, and also on the shaft is a driving-gear 8, carrying a pawl 9 for engaging with a ratchet 10 on the shaft. The gear-wheel 8 is loosely mounted on the shaft, so that motion will not be imparted thereto during the operation of winding the spring through the medium of the gear-wheel 7. However, when the spring unwinds the said gear-wheel 8 will be locked to the shaft by means of the pawl 9 and the ratchet 10.

Mounted to swing on the spring-shaft is a frame 11, which at its upper end connects with a dog 12, extended from a cross-bar 13, secured in the neck portion 3 of the toy. The lower end of the dog 12 is designed to be engaged with the teeth of the wheel 7 for the purpose of winding the spring 6, as will be

hereinafter described. The dog is normally held out of engagement with the teeth by means of a spring 14, attached to the arm 11 and bearing against the edge of said dog. The arm 11 is held normally in its upper position by means of a spring 15 and is prevented from moving too far upward by means of a stop 16.

The gear-wheel 8 meshes with a pinion 17, which is arranged on a crank-shaft 18, and on this crank-shaft is an escapement-wheel 19, with which an escapement 20 engages. From the escapement a lever 21 extends upward and terminates in a weight 22, which serves to control the escapement, and also by extending this lever 21 upward it may be engaged by a stop device, here shown as a pin 23, extended through the top wall of the body portion 1 and adapted to be projected into the line of movement of the weight 22 to hold the motor from operation.

The stop-pin 23 is held normally in its outer position by means of a spring 24. Extended upward at each side of the motor-frame is a post 25, to which is attached a rock-lever 26. The forward end of each rock-lever is pivotally connected to the upper end of an upward projection 27 on a front leg 28, while the rear end of each rock-lever is pivotally connected to an upward projection 29 on a hind leg 30. A link 31 connects the legs of a side, the said link being pivotally connected to a front leg 28 below the pivotal connection with the rock-lever 26, while said link at its opposite end is pivoted to the extension 29 of the hind leg above its pivotal connection with the rock-lever, as plainly indicated in Fig. 1. The front legs are connected to cranks 32 and 33, the said cranks being extended in opposite directions. These cranks also form the pivotal connections for the forward ends of the links 31.

In operation, to wind the motor the section 3 of the neck portion is to be moved downward relatively to the section 2, causing the dog 12 to engage with the gear-wheel 7, moving it a certain distance. Then the neck-section 3 is to be moved back and forth until the spring is completely wound. Then by placing the toy on the floor the motor will cause the legs to move, whereby the toy will walk along the floor. By the pivotal connections

of the links 31 it is obvious that the legs of a side will be moved simultaneously in opposite directions. Front and rear legs of opposite sides will engage with the floor while the  
 5 other front and rear legs are out of engagement with the floor.

It will be noted that the several legs are stiff and not made with joints. This not only provides a very simple construction, but permits of a rising action of the toy while moving forward.  
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Any suitable device may be employed for holding the toy upright—such, for instance, as attaching it to a wagon.

15 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A toy, comprising a body portion, a motor arranged in the body portion, a crank-shaft driven by the motor, cranks at the ends of said shaft and extended in opposite directions, rock-levers mounted in the body portion, front legs connecting with the cranks and with the forward ends of the rock-levers,  
 25 hind legs having pivotal connection with the rock-levers, and links connecting the legs of a side, the connection of said link with the forward leg being below its connection with the rock-lever, while the connection of said  
 30 link with the hind leg is above its connection with the rock-lever, substantially as specified.

2. A toy, comprising a body portion, a motor arranged in the body portion, and comprising a spring, a movable neck-section on the toy, means carried by said section for winding the spring upon a movement of the section, and legs to which a walking motion is imparted by the motor, substantially as specified.  
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40 3. A toy, comprising a body portion, a swinging neck portion, a spring-motor arranged in

the body portion, an arm mounted to swing on the spring-shaft, a dog having pivotal connection with said arm and attached to the swinging neck-section, a gear-wheel on said  
 45 shaft and with which the dog is designed to engage, and legs to which a walking motion is imparted by the motor, substantially as specified.

4. A toy, comprising a body portion, a swinging neck-section, a motor arranged in the body portion, means operated by movements of the swinging neck-section for winding the spring of the motor, an escapement for the motor, a rod extended upward from said escapement and terminating in a weight, a stop-pin for engaging with said weight, and legs to which a walking motion is imparted by the motor, substantially as specified.  
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5. A toy, comprising a body portion, a spring-motor arranged therein, a crank-shaft operated by the motor and having the cranks of its opposite ends extended in opposite directions, front legs having connection with said cranks, rock-levers mounted in the body portion and having pivotal connection at the forward ends with upward extensions of the forward legs, hind legs with which the rear ends of said rock-levers engage, links connecting at their forward ends with the front  
 65 legs, the cranks forming the pivots therefor, the said links at their rear ends connecting with upward extensions of the hind legs, and means carried by the toy for winding the spring of the motor, substantially as specified.  
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In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN HENRY WHITING.

Witnesses:

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 F. V. KELLOGG.