No. 872,069. PATENTED NOV. 26, 1907.

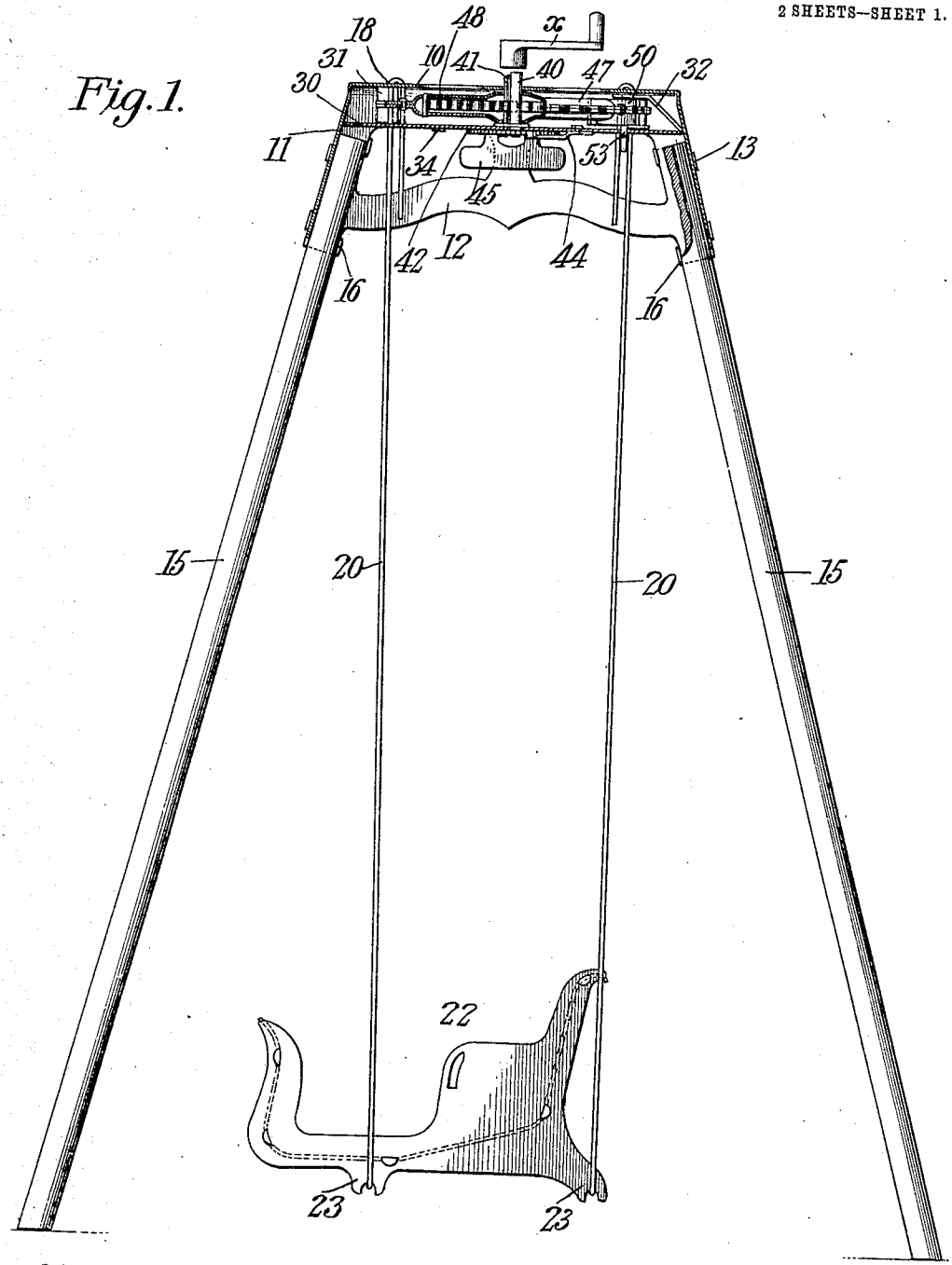
H. T. KINGSBURY.

TOY SWING.

APPLICATION FILED MAR. 28, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

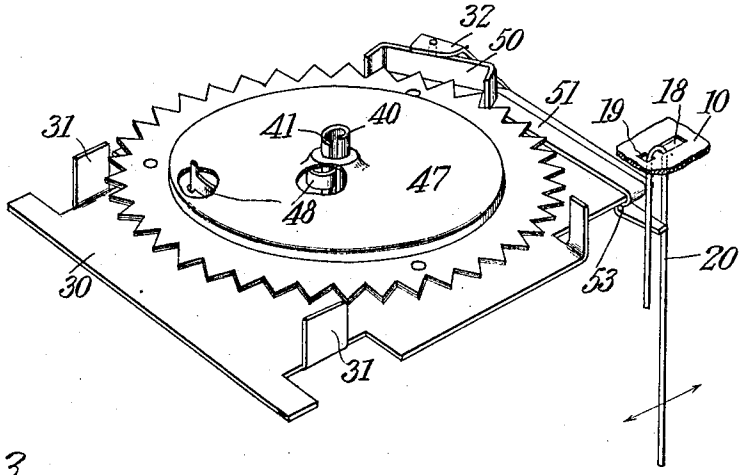


Fig. 3.

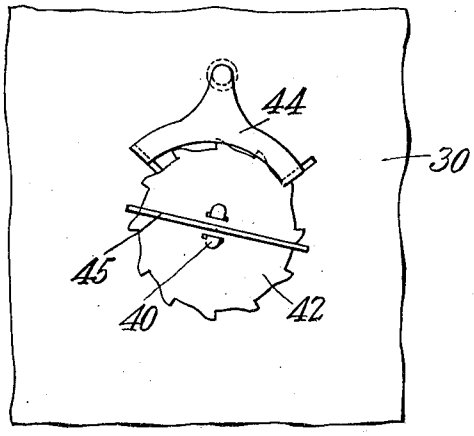
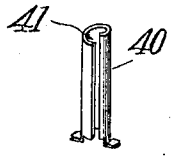


Fig. 4.



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UNITED STATES PATENT OFFICE.

HARRY T. KINGSBURY, OF KEENE, NEW HAMPSHIRE.

TOY SWING.

No. 872,069. Specification of Letters Patent. Patented Nov. 26, 1907.

Application filed March 28, 1907. Serial No. 364,992.

To all whom it may concern:

Be it known that I, HARRY T. KINGSBURY, a citizen of the United States, residing at Keene, in the county of Cheshire, State of New Hampshire, have invented certain new and useful Improvements in Toy Swings, of which the following is a description, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon.

This invention relates to toy swings and similar devices and has for its principal object to construct a novel form of motor propelled swing in which all of the parts are of very simple, light but strong construction and which may be readily knocked down for shipment or storage.

A further object of the invention is to provide a toy of this type in which all of the principal parts may be made of die formed sheet metal which may be manufactured and assembled at small cost.

A still further object of the invention is to so arrange the motor mechanism as to permit winding from both above and below.

With these and other objects in view, my invention consists in the matters hereinafter described and referred to in the appended claims.

Figure 1 is a sectional elevation of a toy swing constructed in accordance with the invention. Fig. 2 is a detail perspective view of the motor carrying plate and motor detached. Fig. 3 is an inverted view of motor carrying plate showing the spring holding ratchet. Fig. 4 is a detail view of the main arbor, detached.

The head or top portion of the swing comprises a top sheet 10, having down-bent sides 11 that are slightly inclined, and auxiliary side members 12 formed of separate sheets, from the tops and ends of which project ears 13 that pass through openings in the main sheet and are thence bent over to secure the parts together. These members may be made more or less ornamental by cutting out fanciful designs during the stamping operation.

The auxiliary side members are adapted to receive the upper ends of the supporting legs 15 which in the present instance are formed of wood, the upper ends of said legs having saw kerfs for the reception of such side members, and the latter are provided with inbent ears 16 to steady the legs. The legs may be readily removed when the toy is to be packed for shipment or storage.

The top plate 10 has four pairs of openings, one opening 18 of each pair being somewhat larger than the other opening 19 and the small strips of metal between these openings form fulcrums for the support of the swing rods 20. The two side rods 20 are of U shape and the upper end of each arm is in the form of a hook so that it may be passed over the fulcrum or pivot. The width of the entire hook is less than the length of the opening 18 so that it may be readily passed up through such opening and the hook end or bill dropped down through the opening 19, thus affording a ready means of attaching or detaching the swing rods.

On the lower cross bars of the swing rods is placed a doll carriage 22 formed of stamped sheet metal, the side plates of the carriage having downwardly extending recessed ears 23 for the reception of the cross bars.

Arranged below the top plate 10 is a motor carrying plate 30 which is cut away at or near the corners, and portions of the metal are struck up to form a plurality of spacers 31 and a pivot bracket 32 which latter also acts as a spacer, the function of these spacers being to preserve a proper distance between the two plates 10 and 30, while the openings or recesses formed in said plate 30 permit the free passage of the swing rods. The plate 30 is held in place by a plurality of ears 34 formed integral with the side plates 12 and bent inward under said plate 30.

Extending through approximately central openings in the two plates 10 and 30 is a hollow arbor 40 also formed of sheet metal, the upper end of said arbor having a notch 41 so that the arbor may be engaged and turned by a detachable winding key, such as x.

The lower end of the arbor after passing through plate 30 is secured to a ratchet wheel 42, the arbor having terminal ears which extend through the openings in the ratchet wheel and are thence bent down in place. This ratchet wheel is engaged by a double locking pawl 44 of a construction somewhat similar to an escapement anchor. To the ratchet wheel is secured a winding key 45.

On the upper portion of the arbor is loosely mounted an escapement wheel 47 that is formed of two disks of metal having recessed

central portions which form a pocket for a spiral spring 48, the inner end of the spring being secured to the arbor and its outer end to the wheel.

Journaled in the plate 30 and bracket 32 is an escapement anchor 50 which is engaged and operated by the teeth of wheel 47, and from the anchor extends a lever 51 the free end of which passes down through one of the recesses in plate 30 and engages one of the hooks of one of the swing rods in order to transmit motion thereto. The escapement lever is rebent, as indicated at 53 in order to partially embrace the edge of plate 30 and thus prevent displacement.

It will be seen that practically all of the device may be cheaply made of stamped sheet metal and that the parts may be readily detached and packed in small compass for shipment or storage.

Having thus particularly described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a toy of the class described, a supporting frame, including a head member, swing rods supported from the head member independently of the motor mechanism, a motor mechanism carried by the head, and an escapement mechanism operated by the motor and arranged to engage and actuate one of the swing rods.

2. In a toy of the class described, a supporting frame including a head member, said member being provided with pairs of spaced openings, the material between such openings forming pivots, swing rods having hooked ends extending over said pivots, a motor mechanism carried by the head and arranged to actuate said swing rods.

3. In a toy of the class described, a supporting frame including a head member, said head member having a plurality of pairs of openings, the openings of each pair being slightly spaced, and the metal between them forming a pivot, a swing rod having a hooked end insertible through one of the openings and adapted to be supported by said pivot, and a motor mechanism carried by the head and arranged to actuate said swing rod.

4. In a toy of the class described, a frame including a head formed of stamped sheet metal arranged to form part of a motor casing, a motor carrying plate arranged within and supported by the head, a spring motor carried by the plate, an escapement mechanism actuated by the motor, and swing rods pivoted to said head independently of said escapement, one of said swing rods being engaged by said escapement.

5. In a toy of the class described, a frame including a head formed of stamped sheet metal, a motor carrying plate arranged within the head and supported thereby, said plate being provided with integral struck up ears to space the plate from the upper plate of the head, a spring motor arranged between the two plates and accessible for winding from both above and below, and a swing rod arranged to be actuated by said motor.

6. In a toy of the class described, a frame including a head formed of stamped sheet metal, the upper plate of the head being provided with a plurality of pairs of openings, the metal between the openings of each pair forming pivots, swing rods having hooked upper heads insertible through one of the openings and arranged to swing on said pivots, a motor carrying plate arranged within the head, plate supporting ears formed integral with said head and bent under a supporting plate, a motor arbor extending through openings in both plates and accessible from both above and below for winding, and an escapement mechanism actuated by the motor and arranged to engage the hook of one of the swing rods.

7. In a toy of the class described, a frame including a head and detachable legs, a pair of U-shaped swing rods pivoted at their upper ends to the head, a swing carriage having notched ears resting on the cross bars of the lower ends of said rods, and a motor mechanism carried by the head and engaging one of the swing rods, swinging movement of the latter being transmitted to the other rod through the medium of the carriage.

In testimony whereof I affix my signature, in presence of two witnesses.

HARRY T. KINGSBURY.

Witnesses:
F. D. RODENBUSH,
L. G. LITCHFIELD.