Sept. 30, 1924. 1,509,879

A. ROMANZAK

MECHANICAL TOY

Filed Feb. 21, 1924

FIG. 1.

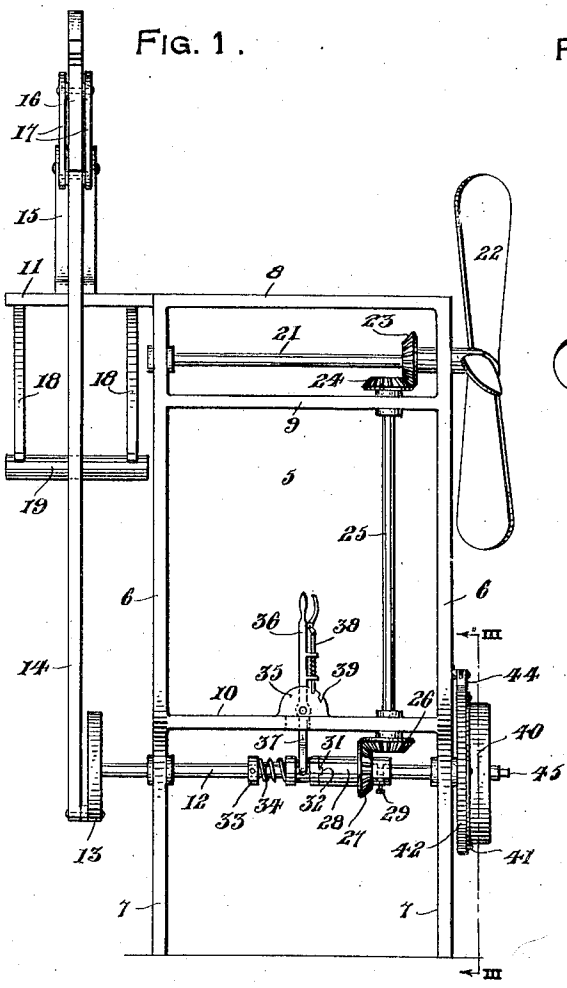


FIG. 2.

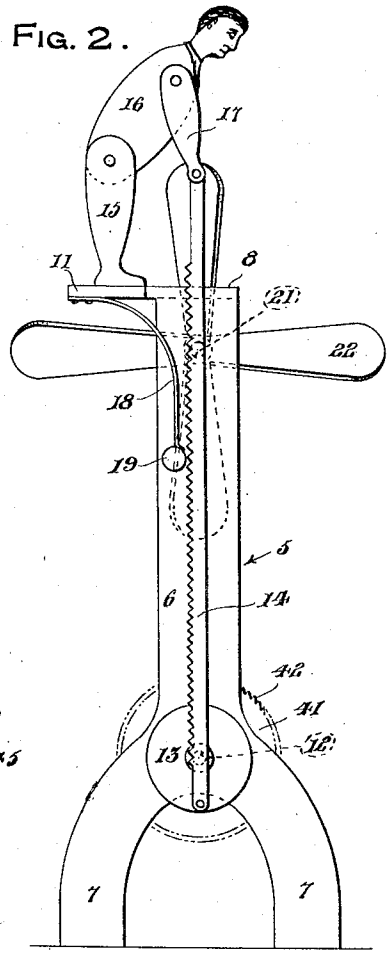


FIG. 4.

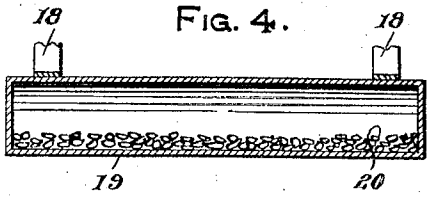


FIG. 5.

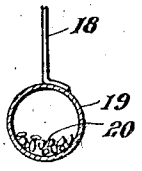
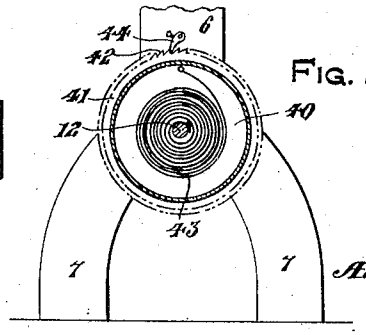


FIG. 3.



Inventor
A. Romanzak

By F. W. Bryant
Attorney

Patented Sept. 30, 1924. 1,509,879

UNITED STATES PATENT OFFICE.

AFTAN ROMANZAK, OF SINGAC, NEW JERSEY.

MECHANICAL TOY.

Application filed February 21, 1924. Serial No. 694,254.

To all whom it may concern:

Be it known that I, AFTAN ROMANZAK, a citizen of the United States of America, residing at Singac, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Mechanical Toys, of which the following is a specification.

This invention relates to new and useful improvements in mechanical toys.

An important object of the invention is to provide a motor actuated toy wherein a miniature doll is provided and operated to imitate the sawing of wood.

A further object of the invention is to provide sound producing means which will create a noise somewhat similar to that produced by a saw cutting wood.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a front elevational view of a toy embodying this invention,

Figure 2 is an end elevational view of the toy shown in Fig. 1,

Figure 3 is a fragmentary vertical sectional view taken upon line III—III of Fig. 1,

Figure 4 is a fragmentary longitudinal sectional view of the sound producing element, and

Figure 5 is a transverse sectional view of Fig. 4.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of this invention, the numeral 5 designates a supporting frame in general which consists of the spaced uprights 6 having the yoke-shaped legs 7 carried by the lower ends thereof. Formed integrally with the upper ends of the uprights 6 is a top plate 8 while spaced transversely extending cross braces 9 and 10 are formed integrally with the uprights 6 and are positioned between the point where the yoke-shaped legs 7 are connected to the uprights 6 and the top plates 8. Formed integrally with this top plate 8 is a laterally projecting platform 11, best illustrated in Figs. 1 and 2.

Journaled in the lower ends of the uprights 6 is a power shaft 12 having keyed to one projecting end thereof the disk 13 which is eccentrically connected to a saw 14.

Rigidly mounted upon the upper face of the platform 11 are a pair of legs 15 which are pivotally connected to the lower end of the body 16 of a toy doll. This toy doll is further provided with pivotally connected arms 17 which are connected at their outer ends to the upper end of the saw 14.

Secured to the bottom face of the platform 11 are a pair of spaced strap springs 18 which are secured at their lower ends to a closed cylinder 19 which is provided with a suitable number of small pebbles or shot 20, as best illustrated in Figs. 4 and 5. It will be seen by inspecting Fig. 2 that the spring straps 18 will retain the shot carrying cylinder 19 in engagement with the teeth of the saw 14 and that longitudinal movement of the said saw will cause the cylinder 19 to be agitated for shaking the pebbles or shot 20 positioned therein for causing a sound similar to the noise produced by a saw cutting wood to be created.

Rotatably journaled in the upper portions of the uprights 6 is a transversely extending shaft 21 having suitably keyed to one end thereof the fan wheel 22. The shaft 21 is further provided with a rigidly mounted bevel gear 23 which is constantly in mesh with a bevel gear 24 carried by the upper end of a perpendicularly extending shaft 25 which is journaled in the cross braces 9 and 10. The lower end of this perpendicularly extending shaft 25 is provided with a bevel gear 26 which is keyed thereto and is constantly in mesh with a bevel gear 27 that is carried by a hub 28 loosely mounted upon the power shaft 12. A set screw 29 is carried by the hub 28 and rides in a suitable groove formed in the power shaft 12 for preventing longitudinal movement of the said hub upon the shaft 12. Slidably keyed to the shaft 12 is a clutch element 30 having teeth 31 formed in one face thereof that are adapted for being moved into and out of engagement with notches 32 formed in the end of the hub 28. A collar 33 is rigidly mounted upon the shaft 12 and is employed for retaining the coil spring 34 in engagement with one end of the clutch element 30 for normally forcing the same into engagement with the hub 28. The cross

brace 10 is provided with a perpendicularly extending, semi-circularly-shaped plate 35 which pivotally supports the lever 36 having a yoke 37 formed at its lower end which loosely engages the clutch element 30. It will be seen that pivotal movement of the lever 36 will cause the clutch element 30 to be moved longitudinally of the shaft 12 into engagement with the hopper 28 or against the tension of the coil spring 34. A latch element 38 is carried by the lever 36 and is adapted for cooperating with the teeth 39 formed in the semi-circularly-shaped plate 35 for retaining the lever 36 in one of two operative positions, to wit: one position retaining the clutch element 30 in operative engagement with the hub 28 and the second position retaining the clutch element 30 out of operative engagement with the hub 28 and in a position to compress the coil spring 34.

Loosely mounted upon the end of the power shaft 12, opposite to the end carrying the disk 13, is a disk-shaped hollow casing 40 having an outwardly directed annular flange 41 formed on its periphery with the said flange 41 provided with the teeth 42. Positioned within the casing 40 is a clock spring 43 which is connected at its inner end to the shaft 12 and at its outer end to one side wall of the casing 40. Pivotally secured to the outer face of one of the uprights 6, in proximity to the periphery of the flange 41, is a pawl 44 which is adapted for being moved into and out of engagement with the teeth 42 carried by the flange 41. The end of the power shaft 12 projecting outwardly of the casing 40 is squared, as at 45, for receiving a winding key or the like. It will be seen by inspecting Fig. 3 that when the power shaft 12 is rotated in a clockwise direction, the clock spring 43 will be wound upon the said shaft 12 if the pawl 44 is positioned in engagement with one of the teeth 42. If the pawl is not in engagement with one of the said teeth 42, the spring 43 and casing 40 will rotate with the shaft 12. If the clock spring 43 is placed under tension, by being wound upon the power shaft 12, after pressure is removed from the power shaft 12, the said spring will cause the said shaft to rotate in a counter-clockwise direction.

It is now believed that the construction and operation of the mechanical toy embodying this invention will be understood from the above detail description. It might be well to note, however, that the spring motor formed by the elements 40 to 45 inclusive will normally be employed for driving the power shaft 12. The rotation of this power shaft will cause the saw 14 to be moved longitudinally for actuating the doll positioned upon the platform 11 and for causing the teeth of the saw 14 to agitate the closed, shot carrying cylinder 19. When the clutch element 30 is in engagement with the hub 28, the shafts 21 and 25 will be operated by the power shaft 12 and the fan wheel 22 will be in operation. The lever 36 may be operated for disconnecting the clutch element 30 from the hub 28 and the fan wheel 22 will be put out of commission.

It is to be understood that the form of this invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described the invention, I claim:—

In a device of the type described, a supporting frame, a power shaft carried by said frame, a platform projecting laterally from the upper end of said frame, a jointed doll mounted upon said platform, a saw connecting said doll and said power shaft in such a manner that rotary movement of the shaft will cause longitudinal movement of the saw, a hollow cylinder carrying granular material resiliently connected to said platform and positioned in engagement with the teeth of said saw, and means for operating said power shaft so that said saw and doll will be actuated and said saw will agitate said cylinder for disturbing the granular material positioned therein.

In testimony whereof I affix my signature.

AFTAN ROMANZAK.