

APPLICATION FILED MAR. 2, 1920.

Patented Mar. 29, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

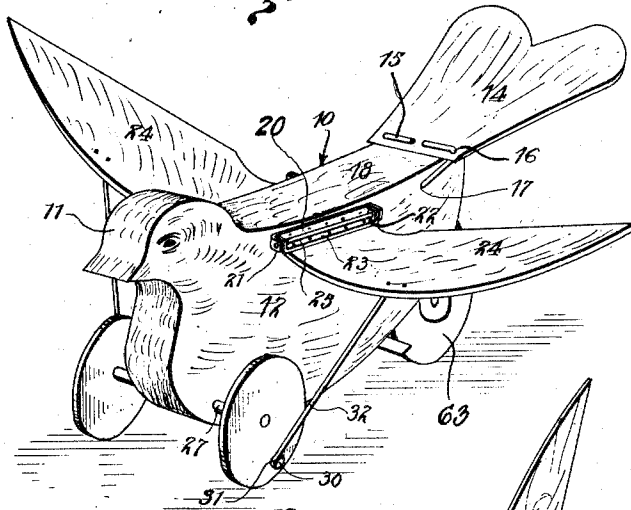
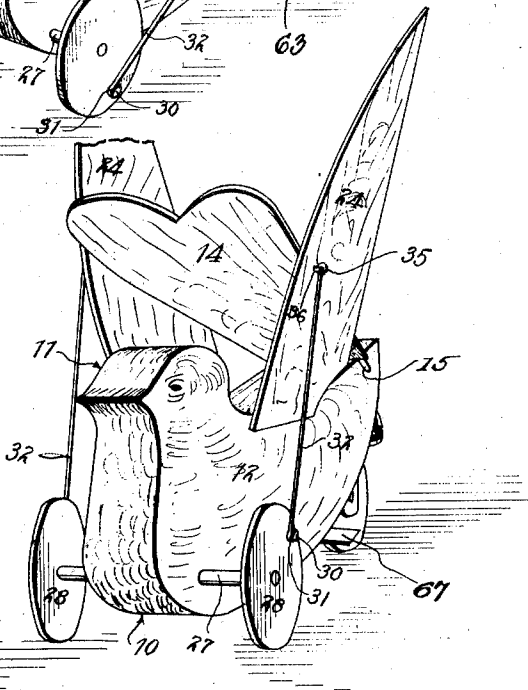


Fig. 2.



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Fig. 3.

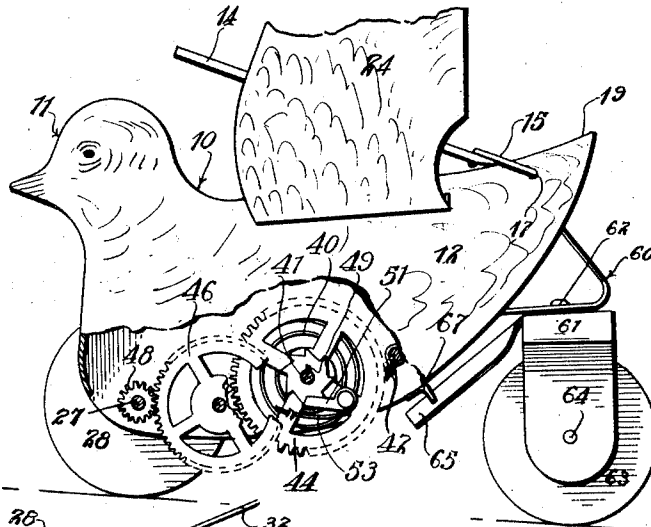


Fig. 4.

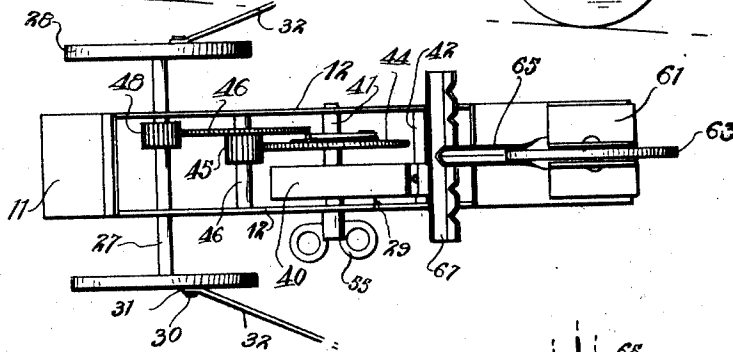
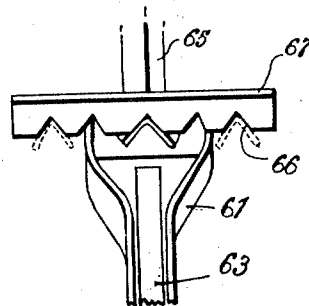


Fig. 5.



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To all whom it may concern:

Be it known that I, SAMUEL PRINGLE BUCHANAN, a citizen of the United States, residing at Dunglin, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in Toys, of which the following is a specification.

This invention relates to improvements in toys constructed to simulate the appearance and movements of a bird.

An important object of this invention is to provide a toy which in general appearance resembles a bird and which is provided with novel means for flapping the wings of the bird as the same travels.

A further object of this invention is to provide a wheeled toy constructed to resemble a bird and having a spring motor adapted for propelling the bird and for flapping the wings of the same during travel.

A further object of the invention is to provide a wheeled toy having novel means whereby the same may be locked against movement in a highly convenient manner.

A further object of the invention is to provide a wheeled toy having novel means whereby the same may be adjusted to travel in a circular path.

A further object of the invention is to provide a toy of the class described which is of highly simplified construction, desirable in use and cheap to manufacture.

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

In the accompanying drawings forming a part of this application and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a perspective of a toy embodying the invention.

Fig. 2 is a similar view of the same illustrating the locking means for the wings whereby the bird may be held against movement.

Fig. 3 is a fragmentary side elevation of the toy, parts thereof being broken away to illustrate the spring motor.

Fig. 4 is a bottom plan view of the toy.

Fig. 5 is a detail view through the toy illustrating the guiding means for the same.

In the drawings wherein for the purpose of illustration is shown a preferred embodiment of the invention, the numeral 10 generally designates the body of the improved toy which is constructed to simulate a bird.

The body 10 is provided at its forward end with a head 11 which for the purpose of appearance may be formed with a forwardly extending bill and on opposite sides with eyes. The body 10 has flat spaced parallel sides 12 preferably formed from flat sheet metal, though the body may if desired be constructed from wood. A tail 14 is arranged at the rear portion of the body and is pivotally connected to the same by a length of wire 15 having its end portions extended through openings 16 in the edge portions of the tail and extended downwardly and pivotally connected to the sides 12, as indicated at 17. In this manner the tail 14 is horizontally pivoted at its forward end to the rear portion of the bird so that when desired the tail may be moved forwardly above the body, as illustrated in Fig. 3, for a purpose to be more fully hereinafter described. The rear end of the body has its upper side 18 curved upwardly, as indicated at 19, to form a stop element which engages the forward portion of the tail and serves to limit the downward pivotal movement of the same. Each side 12 is provided intermediate its ends and adjacent the top 18 with an elongated length of metal 20 having its end portions extended outwardly and apertured to form ears 21 between which the apertured ears 22 of a length of metal 23 carried by a wing 24 are arranged. A pivot pin 25 is extended through each set of apertured ears so that each of the wings are horizontally pivoted at their inner ends to the sides of the body. The wings are of necessity constructed from thin sheets of wood or other light material and therefore the metallic strips 23 serve to prevent the wings from cracking or breaking as the result of hard usage. The wings, however, may be constructed from light metal and the apertured ears 22 in that case may be formed integral with the wings.

An axle 27 is extended through the forward portion of the body and has wheels 28 mounted thereon so that as the wheels are rotated by the spring motor, generally designated by the numeral 29, the body of the bird will be propelled along the floor or other base. Each wheel 28 is provided adjacent its rim with a laterally projecting pin or stud 30 to which the looped lower end portion 31 of a rod 32 is connected. As clearly illustrated in Fig. 2, the upper portion of the rod 32 is formed with a loop 35.

having connection with the eye 36 carried by the under side of the wing at a point intermediate its ends. The rods 32 serve to connect the wheels 28 with the wings so that as the wheels rotate the wings will be caused to flap after the manner in which a bird flaps its wings while in flight.

The spring motor for rotating the wheels and for flapping the wings comprises a spring 40 arranged in spiral formation about the shaft 41 secured at its inner end to the same. The outer end of the spring 40 is secured about a pin 42 extending across the body and rigidly secured to the sides 12. As illustrated in Fig. 4, a spur gear 44 is rotatably mounted upon the shaft 41 and meshes with a pinion 45 rigidly mounted upon the shaft 46 extending across the body. The pinion 45 is in turn rigidly secured to a spur gear 46 meshing with a second pinion 48 keyed or otherwise rigidly secured to the axle 27. A ratchet wheel 49 rigidly secured to the shaft 41 is engaged by a pawl 51 pivoted to one side of the gear 44 so that as the shaft is rotated in one direction the rotary motion will be transmitted to the spur gear from the ratchet wheel. A suitable spring 53 carried by the spur gear engages the pawl 51 for urging the forward end of the same into engagement with the teeth of the ratchet wheel. A winding key 55 is threaded or otherwise secured to the shaft 41 and is adapted to be manually rotated for winding the spring 40.

When winding the spring motor, the tail 14 may be sprung forwardly to engage the opposed sides of the wings so as to secure the wings against movement. It will be noted with reference to Fig. 2, that the wings are not permitted to move upwardly to their fullest extent when the tail is moved forwardly and therefore the wheels 28 are not permitted to rotate. The tail thus acts as a lock for the spring motor and may be readily positioned either when winding the motor or when it is desired to lay the toy down for any length of time without letting the spring run down.

The body is provided at its rear end with a rear wheel support 60 to which a U-shaped member 61 is swivelly connected through the medium of a pivot 62. A guiding wheel 63 is confined between the depending arms of the U-shaped member 61 and is connected to the same by an axle 64. A guiding arm 65 is extended forwardly from the upper portion of the wheel fork 61 and is adapted to engage within V-shaped notches 66 in a transversely extending rack 67. As illustrated particularly in Figs. 3 to 5 inclusive, the rack 67 is L-shaped in cross section and is secured to the under side of the body adjacent the rear wheel so that the forward portion of the arm 65 may be engaged with in any of the V-shaped notches 66 whereby

the wheel may be positioned for steering the body in a predetermined path. Assuming that it is desired to direct the bird along a straight course, the arm 65 will be positioned in the center notch of the rack 67 and should it be desired to cause the bird to describe a small circle, the arm 65 will be engaged within one of the outer notches 66.

In the use of the toy constructed in accordance with this invention, the spring of the motor 29 is first wound and the forward portion of the tail 14 is arranged between the wings 24 so that the wings are prevented from flapping until the tail is moved rearwardly. When the device is placed upon the floor the tail 14 is moved rearwardly of the wings and consequently the wheels 28 are released to permit the spring motor to propel the body. As the bird moves along the floor under the influence of the spring motor, the wings of the bird are moved upwardly and downwardly in imitation of a bird in flight.

With reference to the foregoing description it will be observed that a toy constructed in accordance with this invention may be cheaply manufactured and is enabled to withstand much hard usage by reason of its highly simplified construction.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred embodiment of the same and that such minor changes in construction and arrangement of parts may be made as will remain within the spirit of the invention and the scope of what is claimed.

Having thus described the invention, what is claimed as new is:

1. A toy comprising a body, wheels supporting the body, wings horizontally hinged to opposite sides of the body, a motor carried by the body and having connection with said wings for flapping the same and a member swingingly connected to said body and adapted to be positioned between said wings for locking the same and said motor against movement.

2. A wheeled toy comprising a body, wings pivotally carried by the body, wheels carried by the body and having connection with said wings, a motor for rotating said wheels, and means for locking the wings against movement.

3. A wheeled toy comprising a body, wings pivotally connected to the body, a tail horizontally pivoted to the body and adapted to be arranged between the wings for locking the same against movement in one direction, wheels carried by the body and having connections with said wings, and a motor carried by the body and connected to said wheels for rotating the same.

4. A toy including a body having wings, wheels arranged at opposite sides of the

body, rods connected to said wheels and pivoted to said wings, a motor for rotating said wheels, and means cooperating with said wings for locking said motor.

5 5. A toy including a body, an axle extending through the same, wheels rigidly secured to said axle, a motor connected to said axle for rotating said wheels, wings horizontally pivoted to opposite sides of the body, rods
10 connected at their upper ends to the intermediate portions of said wings and at their lower ends to said wheels, and means for locking said wings and consequently said motor against movement.

15 6. A toy including a body, wings arranged on opposite sides of the body, means pivotally connecting the wings to opposite sides of the body, wheels carried by the

body, a motor connected with said wheels, means connecting said wheels with said 20 wings whereby the wings are caused to flap as the wheels rotate, and a locking device pivoted to the rear end of said body and adapted to be engaged by said wings as the same are moved upwardly whereby the 25 wings are held against movement, the rear end of said body being provided with means for limiting the downward pivotal movement of said locking device.

7. A toy comprising a body, wings piv- 30 oted to said body, a motor having connection with said wings, and a locking device adapted to be positioned between said wings for securing the same against movement.

In testimony whereof I affix my signature. 35

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