Dec. 18, 1928. 1,695,475

F. E. VAUTRIN

FIGURE WHEELED TOY

Filed Oct. 1, 1927

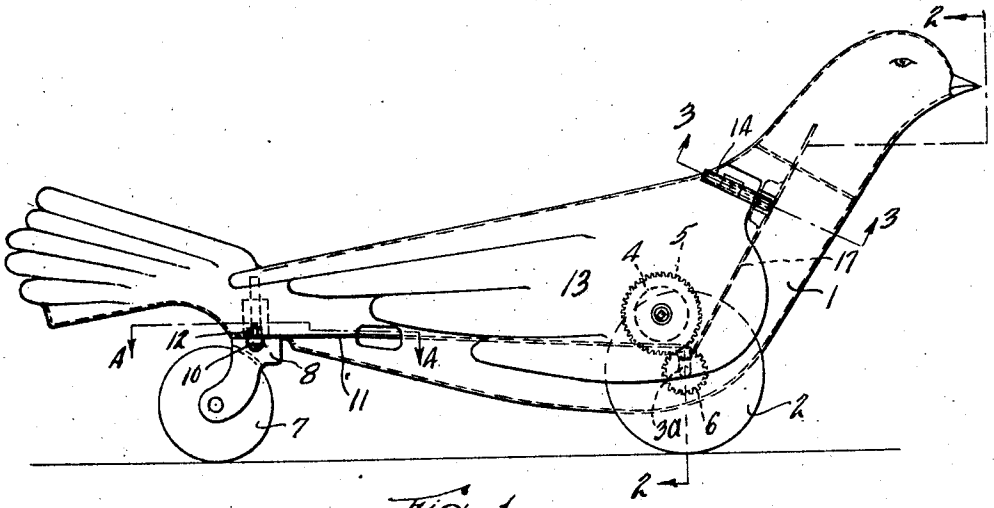



Fig.-1

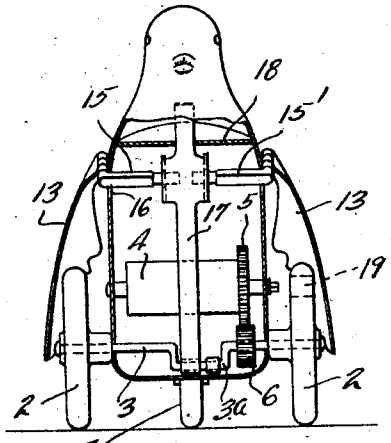



Fig.-2

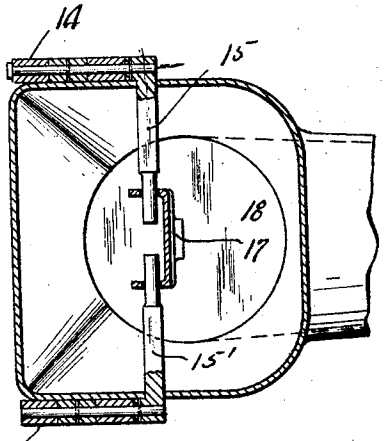



Fig.-3

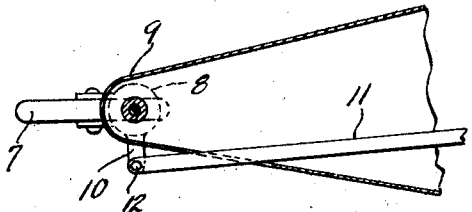



Fig.-4

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# UNITED STATES PATENT OFFICE.

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## FIGURE WHEELED TOY.

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This invention relates to an improved toy.

The object of this invention is to provide a bird form of toy which may be automatically propelled forwardly and which is also provided with flapping wings to be operated simultaneously with the forward movement.

A further object is to provide means for steering the toy, the steering means being operatively connected with the other mechanism so that the direction of advance movement may be automatically and repeatedly changed so as to increase the amusement.

Other objects will appear from the following description and claims when considered together with the accompanying drawing.

Fig. 1 is a side view; Fig. 2 is a view taken on line 2—2 of Fig. 1; Fig. 3 is a view taken on line 3—3 of Fig. 1; and Fig. 4 is a view taken on line 4—4 of Fig. 1.

The main body 1 of the toy is given the form of a bird or a fowl and is supported upon the front wheels 2 which are mounted upon the axle 3 for driving operation thereof. A spring motor 4 is mounted within the body of the bird and is adapted to drive the shaft 3 by means of the meshing gears 5 and 6.

The rear end of the bird is supported upon the wheel 7, the mounting 8 of which is swivelly connected at the point 9. The mounting 8 is provided with the lever 10 which extends to one side and which is adapted for operation by means of the lever 11 pivotally connected thereto at the point 12. The forward end of the lever 11 is connected to the crank portion $3^a$ of the shaft 3. With this arrangement, it will be seen that operation of the shaft 3 will not only cause turning of the wheels 2 but will also cause a movement of the mounting 8 about the point 9 so as to constantly change the position of the steering wheel 7 and thereby vary the direction of forward movement of the bird. The connection at the point 12 may be made readily releasable for the purpose of omitting this automatic operation if so desired. Without this automatic connection, the steering wheel 7 may be set and maintained at any angle desired.

The wings 13 are hingedly mounted at 14 upon the shoulder portions of the bird and the hinge members of the wings are provided with arms 15 which extend inwardly through openings 16 in the body of the bird. The inner adjacent end portions of the arms 15 are received in suitable openings in upwardly extending crank member 17 which in the present case is connected at its lower end to the crank portion of the shaft 3 for operation thereby. The extreme upper end portion of the crank arm 17 extends through an opening in the guide member 18 which is provided across this part of the bird body, although this part may be omitted. The crank member 17 and the hinge arms 15 extend and operate in a plane at right angles to the axis of the hinge connection of the wings. This means that the hinges extend at an angle to the horizontal, approximately at forty-five degrees, according to the showing in the present drawing. In this way, there is obtained the most efficient operative connection for the flapping of the wings, and at the same time the particular angle of mounting of the wings, as here shown, produces a very natural appearance.

Operation of the shaft 3 will therefore cause not only turning movement of the wheels 2 but also flapping movement of the wings 13 and automatic variation of the direction of advance movement of the bird, assuming that the lever arm 11 is connected at the point 12.

The motor 4 may be a spring motor which is adapted to be wound by means of a key which can be inserted through the hole 19 in the wheel or between the spokes of the wheel, according to the particular form of wheel employed. During the winding of the motor, the wings 13 may be maintained in raised position.

From the above, it will be seen that I have devised a form of toy which is not only calculated to afford a high degree of amusement but in which also practically all of the operating mechanism is mounted within the body of the bird and is thereby protected against injury which it might otherwise suffer at the hands of the user.

The particular form of toy here disclosed is of comparatively simple construction and can be manufactured and sold at a comparatively low cost. Furthermore, it is highly efficient in its operation.

What I claim is:

1. A bird toy comprising a bird body, an axle and wheels upon which the body is mounted, a crank on the axle of said wheels, wings having inwardly extending hinged members upon the bird body and adapted for flapping movement, and a motor having

operating connections with said crank and hinge members, said operating connections including a single connecting rod extending inside of said bird body directly from the crank on the axle of said wheels to and having pivotal lever connection with the inner ends of said hinge members for converting rotary motion of the motor into straight line movement for operation of the wings upon their hinges so as to produce a flapping movement thereof.

2. A bird toy comprising a bird body, an axle and wheels upon which the body is mounted, a crank on the axle of said wheels, wings hingedly mounted on the bird body and adapted for flapping movement, said hinge connections being in advance of the axis of said wheels and being inclined, a motor having operating connections with said crank and wings, said operating connections including a pair of levers extending from the wings to the inside of the bird body and towards each other, and a single inclined connecting rod extending inside the bird body directly from the crank on the axle of said wheels to and having pivotal lever connection with the inner ends of said levers for converting rotary motion of the motor into rocking movement of said levers for flapping of the wings, said levers and connecting rod extending and operating in a plane at substantial right angles to the axis of the hinges of the wings.

3. A bird toy comprising a bird body, a pair of wheels supporting the front part of the body, wings hingedly mounted on the bird body and adapted for flapping movement, a swivelly mounted single wheel upon which the rear part of the body is mounted, said single wheel being mounted on substantially the longitudinal axis of the bird body so as to be adapted for steering, a motor and shaft operated thereby for rotating the front wheels, means operated from said shaft and connected to said wings for flapping same and means operated from said shaft and connected to the swivel mounting of said steering wheel so as to automatically vary the direction of movement of the bird during operation of the same, said connections to the wings and steering wheel being enclosed substantially within the bird body.

In testimony whereof, I hereby affix my signature.

FERNAND E. VAUTRIN.