

April 7, 1953

M. LEVINE
TOY SIMULATING ACTIONS OF A FOWL

2,633,666

Filed March 25, 1952

3 Sheets-Sheet 1

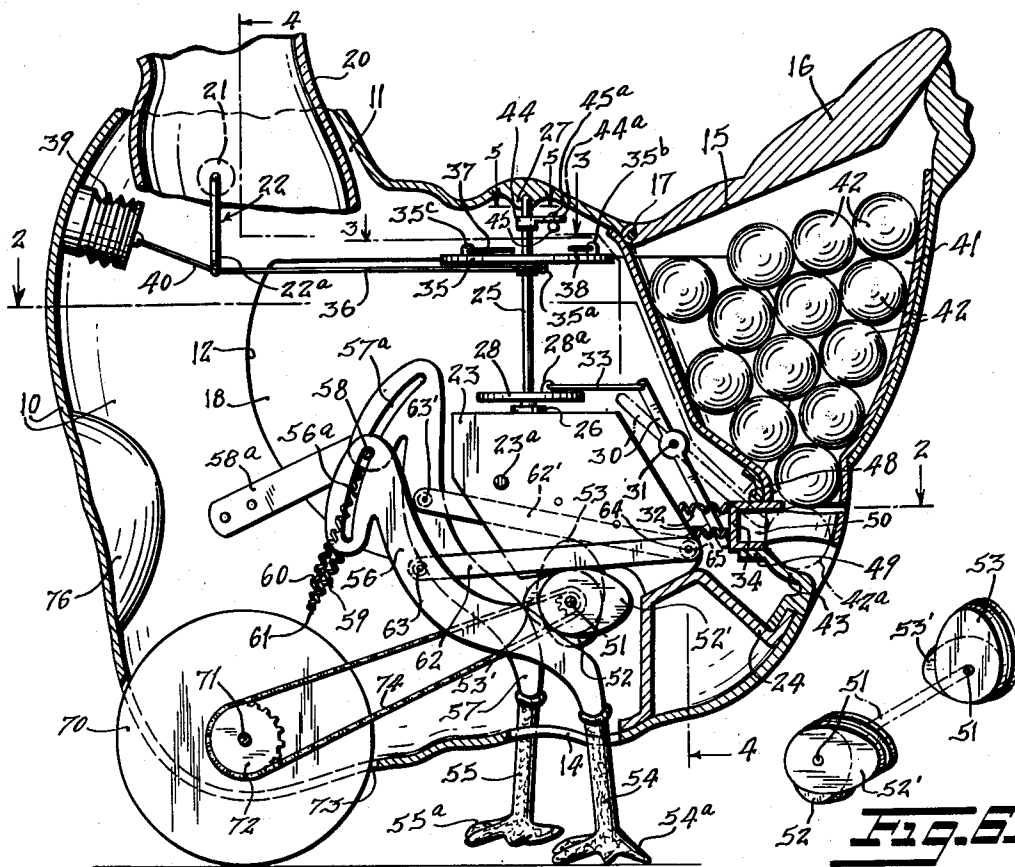
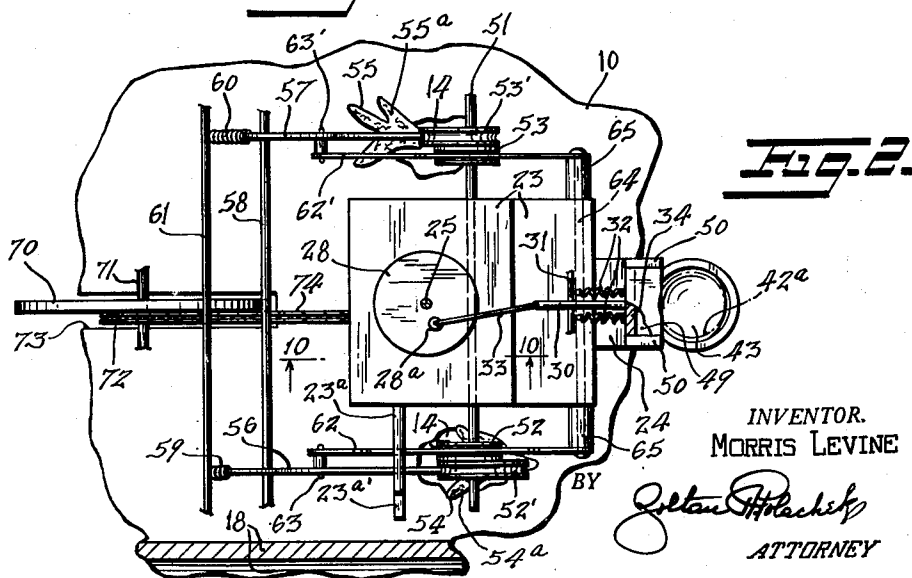


Fig. 1.



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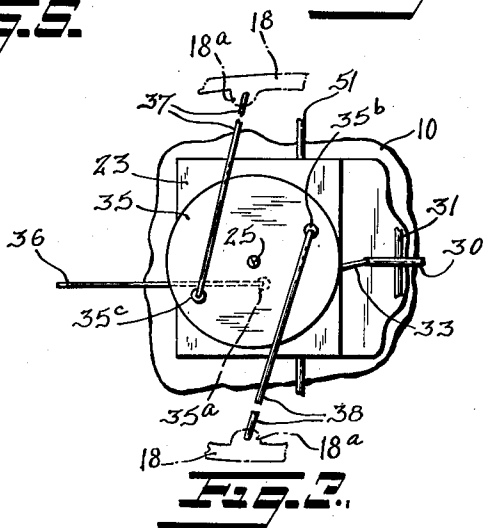
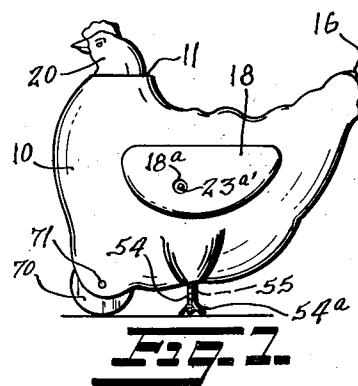
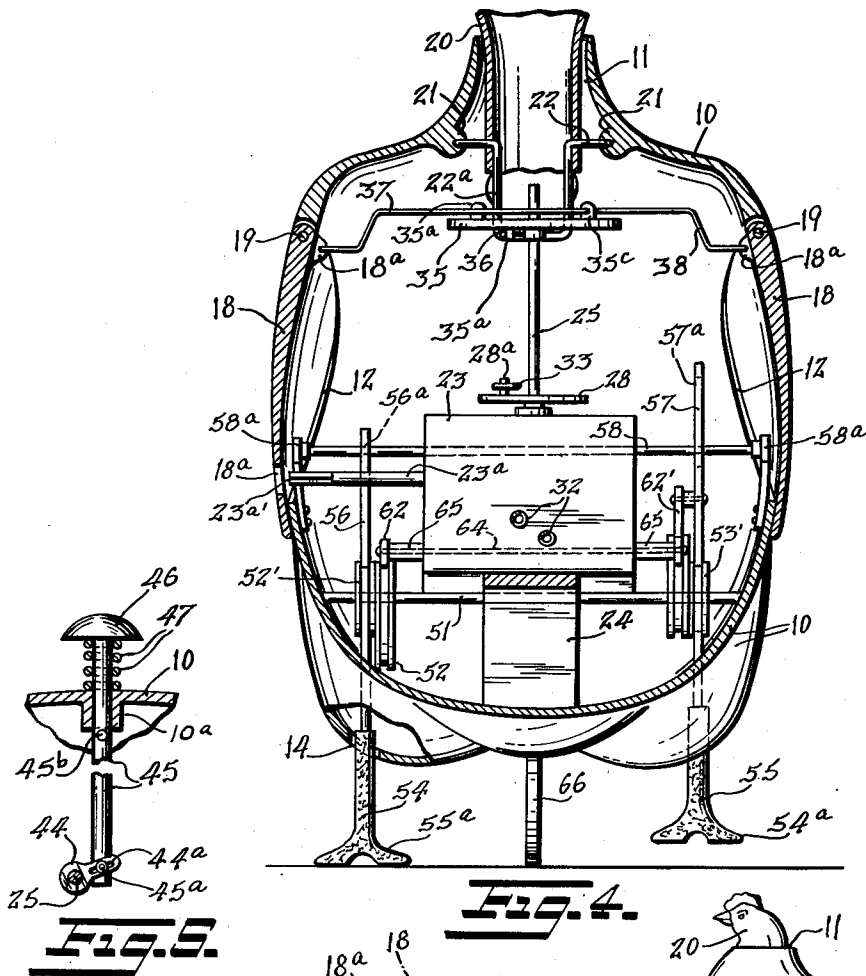
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TOY SIMULATING ACTIONS OF A FOWL

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3 Sheets-Sheet 2



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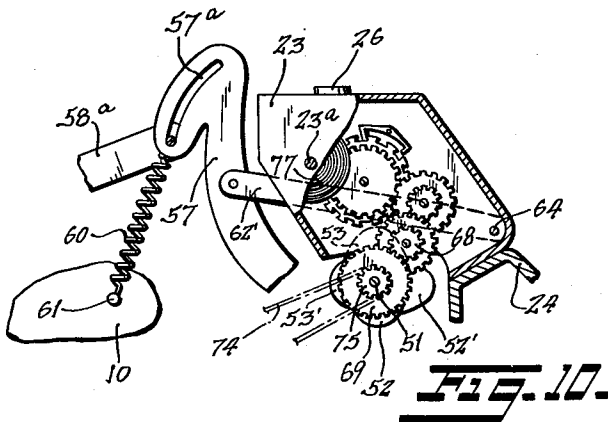
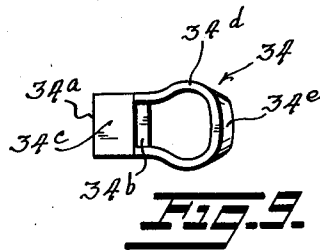
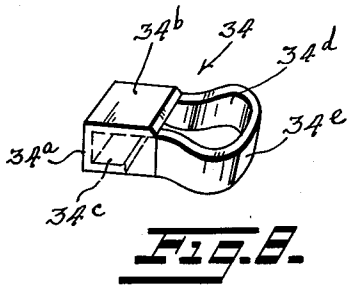
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TOY SIMULATING ACTIONS OF A FOWL

Filed March 25, 1952

3 Sheets-Sheet 3



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2,633,666

TOY SIMULATING ACTIONS OF A FOWL

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Application March 25, 1952, Serial No. 278,447

8 Claims. (Cl. 46—98)

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This invention relates to new and useful improvements in novelty toys, and, more particularly, the aim is to provide a novel and valuable toy incorporating a hollow body for constituting a representation of a hen, duck or other female fowl or the like and interiorly carrying correlated devices whereby, at will, the toy can be made to walk, or to flap its wings, move its head, emit a clucking sound and lay an egg. Desirably, the egg laid is one of a number of candy eggs delivered from a supply thereof stored in a chute or other compartment having an inlet end so placed and arranged that such compartment can be readily given a new supply of eggs whenever desired.

One of the objects of the invention is to provide a toy as above in which means are provided for causing the fowl actually to seem to walk, that is, by first lifting and advancing one leg and foot and then the other; this means including a clock-work mechanism with means for winding up the same from an exterior point on the fowl.

Another object is to provide a means having an egg laying means incorporating a single actuator supported for fractional rotation about a support carried by the clock-work mechanism; with the arrangement such that when said actuator is moved, as by pressing in a push button at an exterior point on the fowl, various exceedingly simple link-like operative connections, all attached to said actuator, are simultaneously variously moved, thereby to flap the fowl's wings, throw up its head, cause the emission of a clucking sound or the like, and at the appropriate instant effect the laying of an egg in a most natural manner.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 illustrates a now favored embodiment of the invention, principally in longitudinal vertical section, but with most of the operative parts shown side elevationally, and with the hen's right leg and foot in course of making a step forward.

Fig. 2 is a fragmentary horizontal section, taken substantially on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary horizontal section, this taken substantially on the line 3—3 of Fig. 1.

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Fig. 4 is a fragmentary detail transverse vertical section taken substantially on the line 4—4 of Fig. 1.

Fig. 5 is a similar detail section, this taken on the line 5—5 of Fig. 1.

Fig. 6 is a schematic view showing the four cams seen in top plan in Fig. 2; with said cams viewed as in Fig. 1 except that the two cam pairs, to illustrate their relative settings on their shaft, are displaced one pair from another pursuant to the fact that in this view said shaft is indicated in dot and dash in perspective.

Fig. 7, drawn to a smaller scale than the other views, shows the hen in side elevation.

Fig. 8 is a perspective view of the egg ejector slide.

Fig. 9 is a bottom plan view of said ejector slide.

Fig. 10 is a fragmentary vertical section, this taken on the line 10—10 of Fig. 2.

The novelty toy, according to the present invention, is shaped to simulate a hen and includes a main body shell 10. This may well be made of papier-mâché, or of any of the more modern plastics. Said shell has an opening 11 at the hen's neck, two side openings 12, these for being normally covered over by flappable wings 13 pivoted at 19, a pair of bottom openings 14, these for allowing walking movements of the hen's legs, 54 and 55, and an above-the-tail top opening 15. For normally closing the opening 15 there is a gravity-drop top closure member 16 pivoted as at 17.

A head shell 20 is provided which is made in the same manner as the body shell 10. The body shell 10 has internal bosses 21 at the opposite inner sides of its neck opening 11. A stiff wire element 22 has its ends loosely received in the bosses 21, and said element passes through and is suitably fixed relative to the head shell 20. The wire element 22 has a central dependent U-shaped bend 22^a.

Mounted in the body shell 10 there is a suitable clockwork mechanism 23 having a shaft 23^a for winding its main spring. The shaft 23^a has an outer squared end 23^{a'} aligned with a hole 18^a in one of the wings 13, see Fig. 4, so that a winding key, not shown, can be engaged with the squared end 23^a. The clock-work mechanism 23 is suitably fixed in place, as by means including a bracket 24.

Above the mechanism 23 there is a vertical shaft 25 having its bottom end rotatively mounted in a bottom bearing 26 fixedly carried by the mechanism 23. The top bearing for said

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shaft is afforded in a boss 27 dependent from the top portion of the body shell 10.

Near the lower end of the shaft 25 the same has fast thereon a disk 28; said disk having an up-standing boss or projection 28^a. For connecting the boss 28^a, and a lever 30 at the rear of the downwardly rearwardly inclined wall of the mechanism 23 (said lever pivoted as by way of a suitably fixed cross rod 31, and being normally urged to its full line position in Fig. 1 by four light retractile springs 32), a stiff wire link 33 is provided.

The tension of the springs 32 is effective relative to the lever 30, because the lower end of said lever bears against an egg-ejector slide 34, and because each of said springs is connected at one end to the casing 23 and at its other end to said slide.

Also fixed on the shaft 25 is a larger upper disk 35. This disk on its bottom has a boss 35^a, and on its top a pair of bosses 35^b and 35^c. A stiff wire link 36 connects the boss 35^a with the wire element 22 at the bottom of its bend 22^a; a stiff wire link 37 connects the boss 35^c with a boss 18^a on the inner face of one of the wings 18, and a stiff wire link 38 connects the boss 35^b with a boss 18^a on the inner face of the other wing 18.

A noise maker 39, desirably of the kind illustrated in Fig. 1, and for making a clucking sound, is suitably fixed in place in the body shell 10 as shown in Fig. 1. This device 39 is shown as of the familiar type which is normally expanded by an internal spring, and which when partially collapsed by thrust thereon emits its sound. A stiff wire link 40 connects the bottom of the U-shaped bend 22^a of the wire element 22 with the device 39.

A magazine 41 for containing a large plurality of candy eggs 42 is suitably fixed in the body shell 10. Of said eggs, one thereof, designated 42^a, is shown in position for being "laid" upon outward movement of the slide 34.

The shaft 25 has mounted thereon, above the disk 35 see Fig. 1, a radially extending arm 44 having a slot 44^a, see Fig. 5, extended parallel to the length of the arm. A manually movable stem 45 has its outer end slidably extended through a tubular portion 10^a of the body shell 10, see Fig. 5, which tubular portion surrounds a complementary aperture in the side of the body shell. The outer end of the movable stem 45 carries a push button 46 by which the stem 45 can be conveniently pushed inward. At its inner end, the stem 45 carries a headed pin 45^a which extends freely through the slot 44^a of the arm 44 so that when the stem 45 is pushed inward the shaft 25 will be turned clockwise, as viewed in Figs. 2, 3 and 5, for turning the disks 28 and 35 similarly. For maintaining the stem 45 projected to the limit permitted by a stop pin 45^b carried by the stem, there is provided an expansion spring 47. The stop pin 45^b is mounted on the stem 45 to abut on the inner end of the tubular portion 10^a. The expansion spring 47 sleeves the outer end portion of the stem 45 and acts between the outer face of the body shell 10 and the push button 46 for imposing a turning movement on the shaft 25 in a counter-clockwise direction as the parts are viewed in Figs. 2, 3 and 5 and so maintain those parts in the inoperative position shown in Fig. 1.

The egg 42^a, being ejected, rests on a cup-seat device 43 suitably fixed in place as indicated. The ejector slide 34 is held to straight line move-

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ment by an upper suitably fixed guide 48 and by a suitably fixed platform guide 49 having a pair of upstanding parallel rail-like rib formations 50. Said ejector slide, as shown best in Figs. 8 and 9 when taken in connection with Figs. 1 and 2, is shaped so as to include a box-like rear portion 34^a the roof wall 34^b of which projects forwardly somewhat beyond the floor wall 34^c thereof; and the side walls of said portion 34^a are continued as forwardly extended bowed extensions 34^d joined at their forward ends by a transversely extended egg detent member 34^e.

Passing through the casing 23 is a suitably journaled transverse horizontal shaft 51. On this shaft, at one side of the casing 23, are fixed peripherally grooved cams 52 and 52'. Also on said shaft, at the other side of the casing 23, are fixed cams 53 and 53'. Cam 52 is identical with cam 53, and cam 52' is identical with cam 53'; but the cam 52 has its nose offset 180 degrees from the nose of the cam 53, and the cam 52' has its nose offset 180 degrees from the nose of the cam 53' (see Fig. 6).

As these parts are shown in the drawings, the cams 52 and 52' are in the positions they occupy when the left leg and foot of the hen are at rest, with the bottom of said foot flat on a supporting surface over which the hen has been placed to walk, and the cams 53 and 53' are in the positions they occupy when the other foot of the hen is at top lift and is beginning to describe the second half or the forwardly descending part of its substantially arcuate line of movement incidental to advance and placement of said foot on said surface.

The two hen's legs are respectively marked 54 and 55; while the two feet of the hen are designated 54^a and 55^a; the foot 55^a being its foot last referred to. These legs and feet may be made of plastic or the like and given markings as indicated to suggest the scale-like appearance of these parts of an actual hen. It will be noted that said legs extend through the openings 14. The feet 54^a and 55^a are each of sufficient surface expanse to act with a wheel 70, to be hereinafter referred to, to support the body in an upright position while the one foot 54^a or 55^a is lifted for being moved forward.

The hen's legs are suitably rigidly connected at their upper ends with the lower ends of a pair of like stampings 56 and 57. These stampings are shaped at their upper ends as shown in Fig. 1, and there they have arcuate slots 56^a and 57^a; these slots engaged by a fixed cross rod 58 supported at opposite ends in brackets 58^a see particularly Fig. 4. Like retractile springs 59 and 60 are connected at their upper ends to the said stampings as shown; these springs being attached at their lower ends to a fixedly positioned cross rod 61.

A pair of like straight levers 62 and 62' are provided in connection with, and at 63 and 63' are pivoted at their forward ends to, the stampings 56 and 57, respectively. Extended through the clock-work mechanism 23 is a cross rod 64, carrying beyond said casing collars 65. Beyond these collars the rear ends of the levers 62 and 62' are pivoted to the terminal portions of a rod 64 as shown in Figs. 2 and 4.

The stamping 56 has a field of movement in the vertical plane containing the peripheral groove of the cam 52', and the stamping 57 has a field of movement similarly related to the cam 53'; each of said stampings having a shaped rear edge always engaging the said groove of its said

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cam. Likewise, the field of movement of the lever 62 is in the same vertical plane which contains the peripheral groove of the cam 52, and the field of movement of the lever 62' is similarly related to the cam 53; each of said levers having its bottom edge always lying in the groove of its said cam.

A suitable drive is provided from the clock-work mechanism in the casing 23, to the shaft 51, thereby to cause rotation of the four cams in a counter-clockwise direction as seen in Fig. 1, and at the desired rate of turn for said shaft; this drive being such as shown in Fig. 10 and terminating in a torque delivering pinion 68 meshing with a spur gear 69 fixed on said shaft 51.

There is also provided a front wheel 70 suitably rotatably mounted as at 71; which wheel can be made of a clear plastic. Suitably secured to the wheel 70 also for rotation about the axis 71 is a sprocket gear 72. A slot-like opening 73 is provided in the body shell 10, through which said wheel may project as shown. Operatively connecting the gear 72 with the clock-work mechanism in the casing 23 in a sprocket chain 74; this chain engaging said gear 72 and also a sprocket gear 75 fast on the shaft 51.

For preventing drop of the tail portion of the hen, due to the large supply of eggs 42 which may at any time be in the magazine 41, a suitable counterweight 76 is fixed inside the body shell 10 at the front thereof.

The exterior of the body shell 10 may be covered with actual or imitation chicken feathers, attached as by a suitable adhesive; in which case the same treatment may be given to the head shell 20 at eye and bill remote locations, to the wings 18, and to the closure member 16. In Fig. 7 the hen is shown only as to its shells 10 and 20, its magazine closure 16, and a wing 18. If these parts are covered with feathers as just mentioned, such feathers may be so arranged that the parts 20, 14 and 18 will not normally be seen as otherwise than smoothly blending with the shell 10.

Operation: When it is desired to have the hen walk, said main spring is wound as just described; and then, when the hen is placed on a supporting surface, the hen's legs and feet alternately rise and advance, one after the other, so that the hen actually walks; that is, the hen advances along said supporting surface, due to rotation of the wheel 70 in a counter-clockwise direction as viewed in Fig. 1, accompanied by first a lifting and a forward swing first of one of the hen's feet, then a similar movement of the hen's other foot, then a similar movement of the first thus moved hen's foot, and so on.

When it is desired, with the hen standing still to have the hen raise its head, flap its wings, emit a clucking sound, and lay an egg, the push button 46 is pushed inward and then released to be returned by the spring 47.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members mov-

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ably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clock-work mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg members thereby to cause the fowl to walk along said surface, said fowl advancing means incorporating a tractive wheel for engaging said surface and rotated relative to said surface by said mechanism, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing.

2. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members movably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clock-work mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg members thereby to cause the fowl to walk along said surface, said fowl advancing means incorporating a tractive wheel for engaging said surface and rotated relative to said surface by said mechanism, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing, the means operable to cause the fowl to walk including for each of said leg members a pair of cams mounted for rotation as one unit by unwinding of said spring.

3. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members movably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clock-work mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg mem-

bers thereby to cause the fowl to walk along said surface, said fowl advancing means incorporating a tractive wheel for engaging said surface and rotated relative to said surface by said mechanism, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing, the means operable to cause the fowl to walk including for each of said leg members a pair of cams mounted for rotation as one unit by unwinding of said spring, the last-named means also including for each leg member a generally upwardly elongate floatably mounted link-like member fixedly connected at its lower end to the upper end of the associated leg member.

4. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members movably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clock-work mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg members thereby to cause the fowl to walk along said surface, said fowl advancing means incorporating a tractive wheel for engaging said surface and rotated relative to said surface by said mechanism, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing, the means operable to cause the fowl to walk including for each of said leg members a pair of cams mounted for rotation as one unit by unwinding of said spring, the last-named means also including for each leg member a generally upwardly elongate floatably mounted link-like member fixedly connected at its lower end to the upper end of the associated leg member, each of said link-like members having near its upper end an arcuate slot and there being a fixed rod-like member engaging both said slots.

5. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members movably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clock-work mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting

and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg members thereby to cause the fowl to walk along said surface, said fowl advancing means incorporating a tractive wheel for engaging said surface and rotated relative to said surface by said mechanism, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing, the means operable to cause the fowl to walk including for each of said leg members a pair of cams mounted for rotation as one unit by unwinding of said spring, the last-named means also including for each leg member a generally upwardly elongate floatably mounted link-like member fixedly connected at its lower end to the upper end of the associated leg member, each of said link-like members having near its upper end an arcuate slot and there being a fixed rod-like member engaging both said slots, said last-named means further including a pair of levers each pivotally connected at one end to a different one of said link-like members intermediate the ends of the latter, said levers near their other ends being pivotally attached to said casing.

6. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members movably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clock-work mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg members thereby to cause the fowl to walk along said surface, said fowl advancing means incorporating a tractive wheel for engaging said surface and rotated relative to said surface by said mechanism, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing, the means operable to cause the fowl to walk including for each of said leg members a pair of cams mounted for rotation as one unit by unwinding of said spring, the last-named means also including for each leg member a generally upwardly elongate floatably mounted link-like member fixedly connected at its lower end to the upper end of the associated leg member, each of said link-like members having near its upper end an arcuate slot and there being a fixed rod-like member engaging both said slots, said last-named means further including a pair of levers

each pivotally connected at one end to a different one of said link-like members intermediate the ends of the latter, said levers near their other ends being pivotally attached to said casing, said cams being peripherally grooved, and relative to each leg member one of its associated pair of cams being arranged in line with the field of movement of said link-like member and the other of said cams being arranged in line with the field of movement of the lever connected to the last-named link-like member, and there being spring means for always maintaining an edge portion of each of said link-like members and of each of said levers in the groove of the cam in line therewith.

7. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members movably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clockwork mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg members thereby to cause the fowl to walk along said surface, said fowl advancing means incorporating a tractive wheel for engaging said surface and rotated relative to said surface by said mechanism, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing, said head member and both said wing members being individually pivotally mounted on

said shell, and there being an operative connection between said fractionally rotatable structure and each of the three last-named members, each of said operative connections consisting of a stiff wire link element.

8. A toy simulative of a female fowl, comprising a body shell, a head member movably carried by said shell, a pair of wing members movably carried by said shell, a pair of leg members movably mounted in said shell and projecting downwardly therefrom, a noise maker carried by said shell, a candy egg holder in said shell, means for ejecting an egg from said shell near the rear end thereof, a clock-work mechanism in said shell, means operable by said mechanism when its spring is wound for causing the fowl to advance over a substantially horizontal surface on which the fowl is placed while causing lifting and forward swinging movements of said leg members to be performed first by one of said leg members and then by the other of said leg members thereby to cause the fowl to walk along said surface, a manually operable means for moving said head member and simultaneously moving said wing members and actuating said noise maker and said egg ejection means, said manually operable means incorporating a single main fractionally rotatable structure, and a means for supporting said structure for rotation about substantially a vertical axis, said mechanism having a casing fixedly attached to said shell and said supporting means including said casing, said shell at a point well in advance of said leg members carrying freely revoluble supporting wheel made of a transparent material to advance said fowl.

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