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MASAMI SEMBA

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BIRD TOY

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Fig. 1.

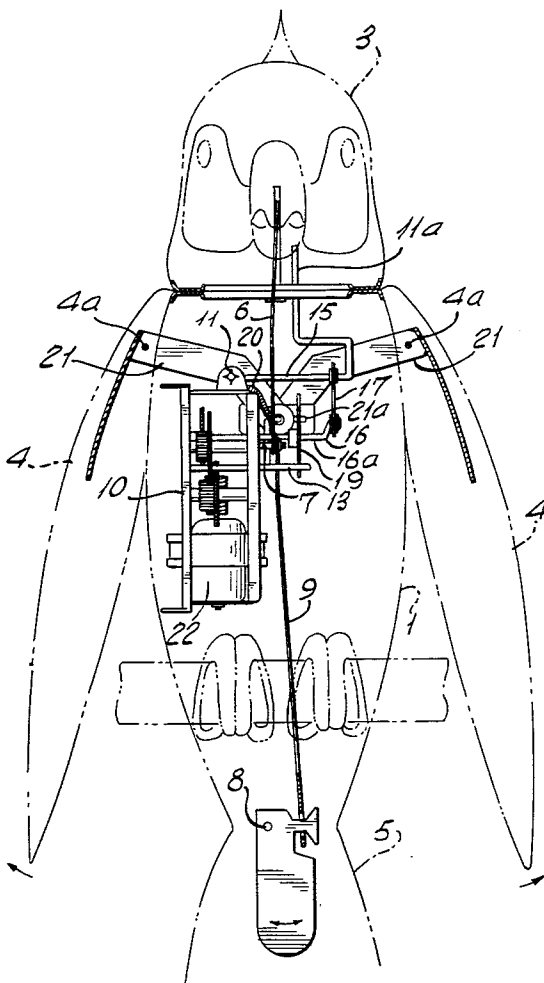
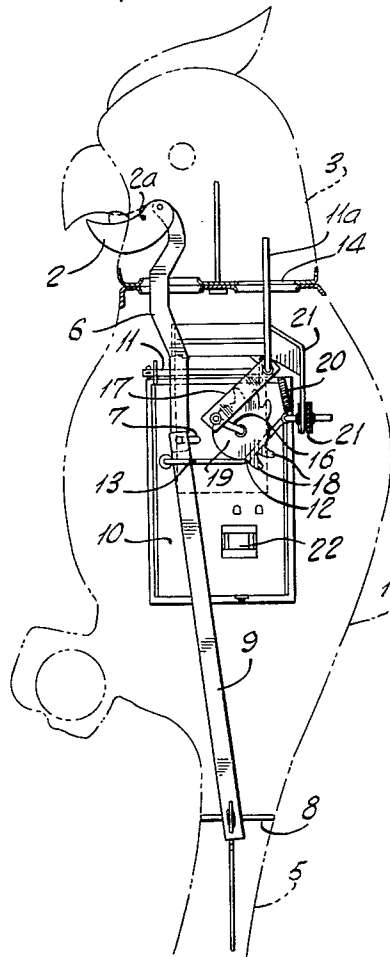


Fig. 2.



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BIRD TOY

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This invention relates to animated figures, particularly toys, and, more particularly, to a novel animated toy bird having a body with movable appendages and novel mechanism for effecting the animation of the appendages.

Animated toy animals are known to the art. Generally, these include a motor driven mechanism, such as an electric motor or spring motor driven mechanism, for animating various appendages movably connected to the body. However, the arrangements used hitherto have been relatively complicated and expensive, as well as difficult to construct and assemble. Consequently, their cost has been such that they have not found widespread popular acceptance.

The present invention is directed to a novel animated toy, preferably in the form of a toy bird such as a toy parrot, and which has movable appendages which are animated by a novel and simplified type of mechanism which is not only inexpensive but may be assembled easily within the body of the toy bird. Thus, with the present invention animated toys can be produced which are simple in construction and easy to assemble, and consequently may be sold at a relatively low price. While the invention will be described more particularly as applied to a toy parrot, it will be understood that this is by way of example only and that the principles of the invention are applicable equally to other animated toys or figures.

For an understanding of the principles of the invention, reference is made to the following description of a typical embodiment thereof as illustrated in the accompanying drawing. In the drawing:

FIG. 1 is a front elevational view of a toy parrot embodying the invention, with the animating mechanism being shown in solid lines and the outlines of the body of the bird and its appendages being shown in broken lines; and

FIG. 2 is a side elevational view of a toy parrot embodying the invention, the animating mechanism again being shown in full lines and the outlines of the body of the bird and its appendages being shown in broken lines.

Referring to the drawings, the invention is illustrated as embodied in a toy bird, such as a toy parrot, having a hollow body 1 provided with a head 3 which is rotatable relative to the body 1 and has a movable beak part 2. Wings 4 and a tail are movably, such as swingably, connected to the body 1. The movable beak part 2 is pivoted to head 3 at 2a, nearer one end than the other, and the inner end of beak part 2 is pivotally interconnected with a link 6 whose other end is connected to a crank 7 which is rotated by the driving mechanism. A second connecting rod or link 9 is connected to the crank 7 at one end, and its other end is connected to a moving member or operator 5 for the tail, this moving member being pivoted to body 1 at a point 8 spaced from the connection of the link 9 thereto.

A bent rod 11 and a bent rod 13 are swingably connected to a frame 10 for the driving mechanism. Bent rod 11 has a generally horizontally extending portion 15 and an upwardly extending portion 11a, and the latter extends through a radial slot 14 in the rotatable mounting for the head 3. This rotatable mounting comprises a pair of superposed circular plates each having a peripheral flange, and the plates being relatively rotatable about a pin at their centers. The slot 14 is formed in the upper of the two plates, which is the plate secured to the head 3.

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A connecting rod 17 is pivotally connected at one end to the horizontal portion 15 of the bent rod 11, and has its opposite end connected to the crank portion 16 of a crank shaft 16a which has a disk 19 fixed thereon and formed with a number of peripheral projections or fingers 18. These projections 18 are successively engageable with a part 12 of the rod 13. A spring 20, secured between frame 10 and the rod 13, maintains rod part 12 in continuous engagement with the disk 19 and projections 18. Rod 13 has a free end engageable in substantially rectangular slots 21a in arm operating members 21 each of which is pivoted, as at 4a, and has a free portion extending along a wing 4. An electric motor 22 is provided, and has reduction gearing associated therewith operable to rotate the cranks 7 and 16.

When motor 22 is energized, the cranks 7 and 16 will be rotated. The beak part 2 will be opened and closed through the medium of the connecting rod or link 6, and the tail 5 will be swung through the medium of the connecting rod 9 which is connected, at its lower end, to the tail operating member 5 pivoted at 8. The connecting link 17, which is connected between the crank 16 and the part 15 of the rod 11a, will oscillate rod 11 so that upwardly extending part 11a of rod 11 will oscillate the head 3 through a small arc about a vertical axis.

As the projections 18 of the disk 19 successively engage the part 12 of the rod 13, when the disk 19 is rotated by the motor 22 and its associated reduction gearing, the rod 13 will be oscillated in timed relation with the rotation of the crank 16. As a result, the wings 4 will be moved up and down about the pivots 4a and thus will give the effect of fluttering.

If desired, the animating mechanism of the present invention may have combined therewith a suitable sound device so that the toy bird will be realistic and interesting. It will be noted that the animating mechanism is simple and consists of only a few very simple parts. Thereby, the mechanism of the present invention is simple and inexpensive to manufacture, rugged and practical in operation, and has a long life, in addition to providing a very realistic motion of the appendages of the bird.

While a specific embodiment of the invention has been shown and described in detail to illustrate the application of the principles of the invention, it will be understood that the invention may be embodied otherwise without departing from such principles.

What is claimed is:

1. An animated toy bird comprising, in combination, means forming a generally hollow body; a pair of superposed substantially circular upper and lower plates mounting a generally hollow head on said body for rotation relative to said body about a generally upwardly extending axis, the lower plate being secured to said body and the upper plate being secured to said head and said plates being relatively rotatable about said generally upwardly extending axis; the lower plate having a relatively large aperture formed therethrough and the upper plate having a radial slot therein; a beak part projecting from and swingably mounted about a pivot in said head; a tail swingably connected to said body, and including a tail operating member having a pivotal mounting in said body; a motor mounted in said body; a first crank rotatable in said body; gearing interconnecting said motor and said first crank whereby, upon operation of said motor, said first crank will be rotated; a frame mounted in said body and supporting said motor, said gearing and said first crank; a first link connected at one end to said first crank and extending upwardly through aligned apertures in said plates, the opposite end of said first link being connected to a portion of said beak part spaced from the pivot thereof; a second link connected at one end to said first crank

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and extending oppositely to said first link, the opposite end of said second link being connected to a portion of said tail operating member spaced from the pivotal mounting thereof; a bent rod swingably mounted on said frame and having a free end projecting through said relatively large aperture and engaged in said radial slot; a second crank supported by said frame and rotated by said gearing; and a third link connecting said second crank to an intermediate portion of said bent rod whereby to oscillate said bent rod to, in turn, oscillate said head relative to said body; said beak, upon operation of said motor, being opened and closed by said first link and said tail being oscillated by said second link, in timed relation with each other.

2. An animated toy bird as claimed in claim 1, including wings each pivoted to said body at a respective pivot; wing operating arm members including portions engaged with said wings and having ends extending from the pivot of said wings into said body, the inner ends of said arms being formed with aligned slots therein; a second bent rod member swingably mounted on said frame and having a free

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end engaged in said slots; and a disk rotatable by said gearing and having peripheral projections engageable with an intermediate portion of said second bent rod member to oscillate the latter to swing said arms to flutter said wings.

3. An animated toy bird as claimed in claim 2, including spring means biasing the intermediate portion of said second bent rod member into engagement with said disk projections.

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