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ANIMATED CHRISTMAS TREE ORNAMENT

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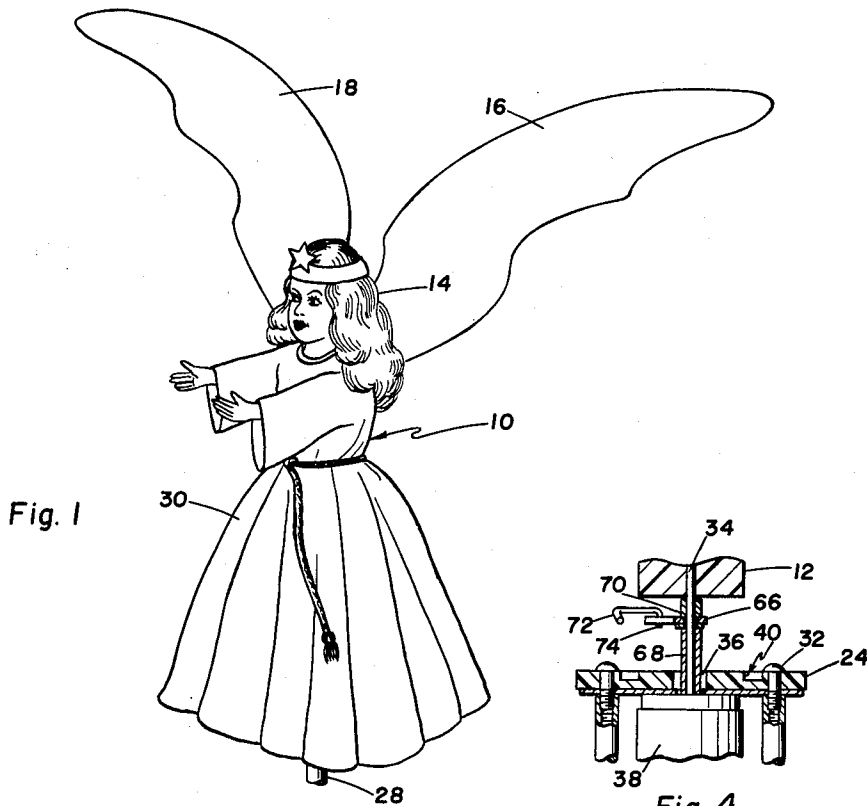


Fig. 1

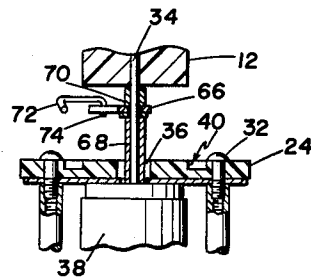


Fig. 4

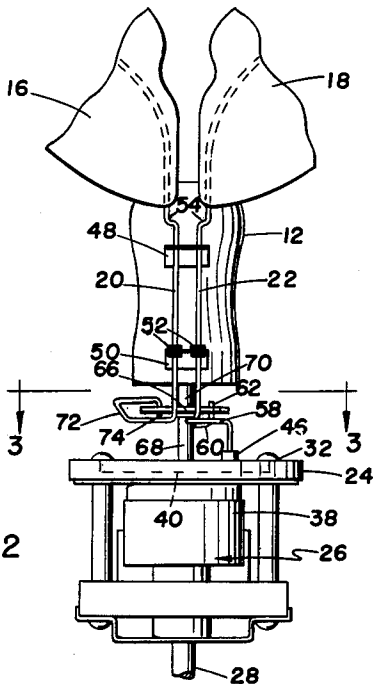


Fig. 2

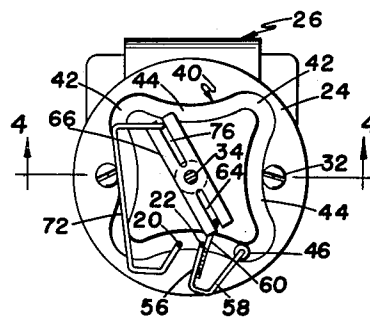


Fig. 3

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AGENTS FOR APPLICANT

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ANIMATED CHRISTMAS TREE ORNAMENT

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3 Claims. (Cl. 46—120)

The present invention relates generally to animated figures and more particularly to an animated Christmas tree ornament.

The primary object of this invention is to provide an animated Christmas tree ornament which simulates an angel having flapping wings.

Another object of this invention is to provide an animated ornament in which the wing flapping is actuated by a small motor of limited power.

Another object of this invention is to provide such an animated ornament in which the motor and associated wing flapping mechanism are concealed beneath the robe of the angel.

Another object of this invention is to provide an animated Christmas tree ornament which is adapted for fabrication from many different materials, so that the choice of material can be according to the dictates of availability and price considerations, the exact sizes and proportions being matters easily determined to suit particular conditions and needs.

Another object of this invention is to provide an animated Christmas tree ornament which is inexpensive and practicable to manufacture.

Finally, it is an object to provide an animated Christmas tree ornament of the aforementioned character which is simple, safe and convenient to operate, and which will give generally efficient and durable service.

With these and other objects definitely in view, this invention consists in the novel construction, combination and arrangement of elements and portions, as will be herein-after fully described in the specification, particularly pointed out in the claims, and illustrated in the drawing which forms a material part of this disclosure and wherein similar characters of reference indicate similar or identical elements and portions throughout the specification and throughout the views of the drawing, and in which:

Fig. 1 is a perspective view of the ornament.

Fig. 2 is a fragmentary rear elevation view of the wing flapping mechanism.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a fragmentary sectional view taken on the line 4—4 of Fig. 3.

Referring now to the drawing, the ornament comprises, in brief, an angel 10 having a body 12 and a head 14, and a pair of wings 16 and 18 pivotally attached to the body 12 and carried on wing shafts 20 and 22, respectively. The wing flapping is controlled by a cam 24, the mechanism being driven by a motor 26 which is mounted on a support 28. The angel is provided with a robe 30 of suitable design, which is suspended from the upper end portion or shoulders of the body 12 and conceals the mechanism including the motor 26.

The motor 26 may be of any suitable type, a small electric motor being shown in the drawings as an example. The cam 24 comprises a disc shaped element which is attached to the motor 26 by screws 32, or other suitable means according to the design of the motor. The drive

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shaft 34 of the motor extends upwardly through an aperture 36 in the cam 24, and is embedded firmly in the body 12 so that the angel rotates with the shaft. The motor 26 is of course fitted with a reduction gear box 38 to obtain a suitable slow rotation of the angel.

The cam 24 has a grooved cam track 40 having four rounded corners 42 which are connected by arcuate track portions 44, thus providing a smooth, continuous path for the cam follower 46.

The wing shafts 20 and 22 are disposed vertically at the rear of the body 12 and are pivotally mounted in parallel relation in brackets 48 and 50 which are secured to said body. The wing shafts are prevented from vertical movement by washers 52 secured thereto above and below the lower bracket 50.

The upper ends of the wing shafts 20 and 22 are provided with cranks 54 so that the wings are held clear of the body while flapping, the shafts being extended into the wings to reinforce them and ensure a firm attachment.

The lower end of the shaft 22 is bent outwardly as indicated at 56, and return folded to form a substantially U-shaped actuating crank 58, the end of which is downwardly bent and attached to the cam follower 46. Secured to the outwardly bent portion 56 is a transfer bar 60 which extends inwardly and has an upwardly disposed end 62. This end 62 is slidably engaged in the slot 64 in one end of a toggle 66, which is pivotally mounted on the drive shaft 34 and held thereon between spacers 68 and 70.

The lower end of the shaft 20 is bent to form a substantially C-shaped actuating crank 72 which extends across the cam 24 and has a downwardly turned end 74. This end 74 is slidably engaged in a slot 76 at the other end of the toggle 66, thus oscillation of the toggle, caused by the cam follower 46 riding in the cam track 40, is also imparted to the shaft 20 so that both wings flap simultaneously.

The ornament is fastened to a Christmas tree by the support 28 in any suitable manner. For example, the support may be of tubular construction so that it may be placed over the uppermost limb of the tree. However, the support 28 may also be fitted with a base of suitable design so that the ornament may be used elsewhere, such as on a shelf.

The method of operation is extremely simple. As the motor rotates, the drive shaft 34 is rotated slowly, carrying with it the body 12. The wing shafts 20 and 22 being attached to the body, the cam follower 46 will thus be pulled around the cam track 40. The subsequent radial movement of the cam follower caused by the shape of the cam track will impart an oscillation to the wing shaft 22, which, through the toggle 66, will cause a similar oscillation of the wing shaft 20. In this way, the wings will flap continually as the angel rotates.

The motor may be of a type suited for prolonged operation at the relatively small load required, such as a synchronous clock type motor connected to a household electrical circuit.

The operation of this invention will be clearly comprehended from a consideration of the foregoing description of the mechanical details thereof, taken in connection with the drawing and the above recited objects. It will be obvious that all said objects are amply achieved by this invention.

Further description would appear to be unnecessary.

It is understood that minor variation from the form of the invention disclosed herein may be made without departure from the spirit and scope of the invention, and that the drawing and specification are to be considered as merely illustrative rather than limiting.

I claim:

1. An animated ornament comprising a support having a motor thereon, said motor having a slowly rotating drive

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shaft, a body secured to said drive shaft, a pair of shafts pivotally attached to said body and parallel to said drive shaft, a cam secured to said motor, a toggle pivotally mounted on said drive shaft, said toggle having longitudinal slots therein, one of said shafts being slidably engaged in one of said slots and having thereon a cam follower engaging said cam, the other of said shafts being slidably engaged in the other of said slots, whereby both of said shafts are oscillated about their axes by movements of said cam follower.

2. An animated ornament comprising a support having a motor thereon, said motor having a slowly rotating drive shaft, a body secured to said drive shaft, a pair of shafts pivotally attached to said body and parallel to said drive shaft, a cam secured to said motor, a toggle pivotally mounted on said drive shaft, said toggle having longitudinal

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slots therein, one of said shafts being slidably engaged in one of said slots, and having thereon a cam follower engaging said cam, the other of said shafts being slidably engaged in the other of said slots, whereby both of said shafts are oscillated about their axes by movements of said cam follower, and wings attached to said shafts.

3. An animated ornament according to claim 1 and including a robe suspended from the upper end of said body and covering the major portion of said body and said motor.

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