

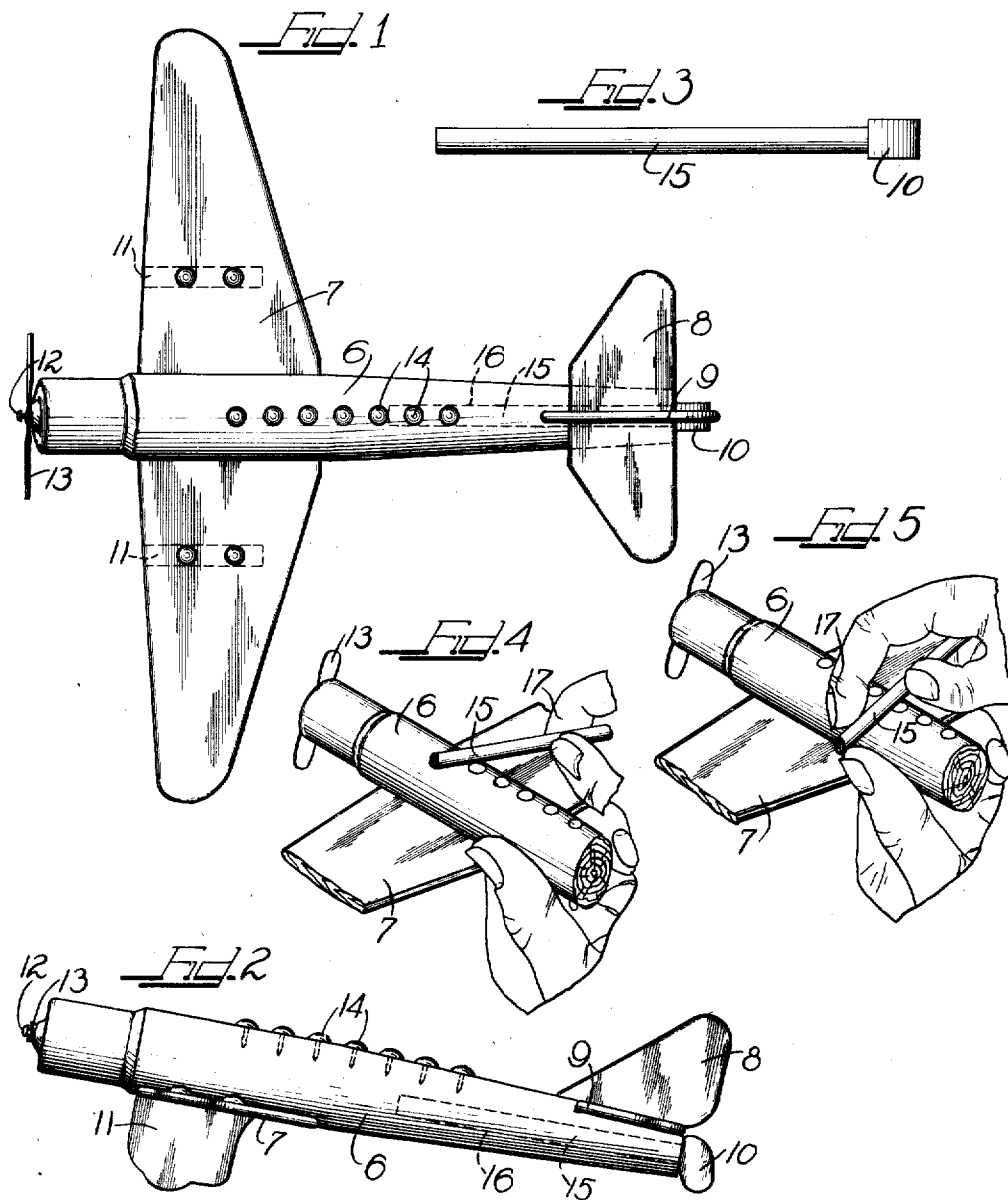
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TOY

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TOY

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The present invention relates to a toy having a movable element, and in which vibratory motion may be converted into rotary motion on the part of said movable element.

We are aware that in the past a toy has been provided including a body portion having a series of notches along an edge thereof, a rotatable propeller pinned to the body portion, and a separate stick which may be used to rub over the notches, thus causing vibrations which will be communicated to the pin of the propeller and cause the propeller to rotate. Such a toy is disclosed in U. S. Letters Patent No. 664,382, issued in the name of E. B. Chapman, and dated December 25, 1900. However, such a device was objectionable in that it did not have as much appeal to the mind of a child as is deemed desirable.

Accordingly, it is an important object of the present invention to provide a toy of such character designed to have a very strong appeal to a child.

It is also an object of this invention to provide a toy of such character shaped in simulation of a vehicle, such, for example, as an airplane.

Another object of the invention is the provision of a toy of the character described herein which may be shaped to simulate a vehicle, and in which one of the simulating parts may be removed and utilized as the actuator for the rotatable member.

It is also a feature of the invention to provide a toy of the character described herein shaped in simulation of a vehicle, and in which a simulating part is provided with an elongated shank normally concealed by another part of the structure, and this part may be removed and used as an actuator for the rotatable member.

A further object of the invention is the provision of a toy of such character, made in simulation of a vehicle, with the rotatable element also simulating a portion of the vehicle.

Another feature of the invention is the provision of a toy of the character described herein shaped to simulate a vehicle, and in which a part is provided with a series of interruptions which may be rubbed over by a suitable rod-like element to cause rotation of a rotatable member, the construction being such that the rotation may be reversed in direction by changing the position of the operator's fingers upon the rubbing element.

While some of the more salient features, characteristics and advantages of this invention have been above pointed out, others will become apparent from the following disclosures, taken in

connection with the accompanying drawing, in which:

Figure 1 is a top plan view of a toy embodying principles of the present invention;

Figure 2 is a side elevational view of the structure shown in Figure 1;

Figure 3 is an enlarged bottom plan view of a portion of the structure removed from the remainder;

Figure 4 is a fragmentary perspective view illustrating the operation of the toy; and

Figure 5 is a fragmentary perspective view also illustrating the operation, and indicating how the direction of rotation may be reversed from that of Figure 4.

As shown on the drawing:

The preferable form of the present invention is in simulation of a vehicle, and for purposes of illustration we have shown the invention as embodied in a toy constructed in imitation of an airplane, although the invention may be made in the form of some other vehicle, as may be deemed most desirable. The device may be made of wood or metal, as may be deemed most expedient, although for purposes of adequate vibration, it is in most cases preferable to have the body portion, in this instance the fuselage, made of wood.

The simulated airplane includes a body part 6 simulating the fuselage of an airplane, and other parts are attached to the body 6 to fabricate an imitation airplane. These other parts include a wing member 7 tacked, glued or otherwise secured to the body in proper position, a stabilizer 8, a rudder 9, a tail skid 10, and a landing gear made up in this instance of two separate pieces 11—11. The structure also includes a headed pin 12 secured in the forward end of the body 6, which pin functions as a shaft for a rotatable propeller 13.

At a suitable location on the body, a series of interruptions are provided, and in this instance a series of headed tacks 14 are used for this purpose. The use of such tacks also enhances the appearance of the toy as a whole. It will, of course, be understood that such a series of interruptions may also be had by providing a row of spaced notches in the body part 6. It is preferable, in most cases to have the series of interruptions on the same part of the device that carries the propeller, so that the vibrations developed in a manner later described may be transmitted directly to the propeller pin 12. Of course, if the structure is made relatively in one piece, outside of the propeller and the rubbing

element, more leeway is had in the distribution of the interruptions.

In order to produce vibrations to cause rotation of the propeller, a rod-like element or stick is necessary which is rubbed briskly over the series of interruptions. Such a stick may be separate from the device as a whole, but it is preferable and renders the device more pleasing to a child to incorporate the rubbing element directly in the general structure.

To this end, one of the parts of the structure, which part is in imitation of a vehicle part, is made removable, and in this instance the tail skid 10 is removable, while all of the other parts, save the propeller, may be fixed. This tail skid is provided with an elongated shank 15 which functions as the rubbing element. In order to conceal the shank 15 when the device is not in use, the body 6 may be provided with a suitable opening or aperture 16 to accommodate the shank 15, the shank being preferably retained in the opening by friction. It is a simple expedient to remove the tail skid by grasping the projecting portion 10, twisting it if necessary, and withdrawing the shank from the opening 16.

After withdrawal of the shank 15, the body 6 may be held in one hand by a user in any suitable manner, and the shank 15 may be gripped between the fingers of the other hand and rubbed briskly over the series of interruptions. With reference to Figure 4, it will be seen that the forefinger 17 of the operator's hand is positioned on the right-hand side of the body, while holding the rubbing element, and in such a position or with such a grip, the propeller will be caused to rotate in one direction. If, however, the forefinger 17 is moved along the stick to the opposite side of the body 6, as illustrated in Figure 5, the propeller will rotate in the opposite direction, and if it is rotating in one direction, when a change in the grip is made it will promptly stop and immediately start rotating in the other direction.

From the foregoing it is apparent that we have provided a toy capable of converting vibratory movement into a rotary movement of a different part, which toy may be made in simulation of a vehicle, and wherein a part of the simulated vehicle may be used as an actuator to cause rotation of the rotary element, and which is thus rendered more attractive to a child. It will also be apparent that the device is simple in construction and economical to manufacture.

We are aware that many changes may be made and numerous details of construction may be varied through a wide range without departing from the principles of this invention, and we, therefore, do not purpose limiting the patent granted hereon otherwise than is necessitated by the prior art.

We claim as our invention:

1. As an article of manufacture, a toy shaped in simulation of an airplane, including a fuselage

with a series of salient humps thereon, a rotatable propeller on said fuselage, a wing element, a stabilizer element, and a skid element, one of said elements including a portion extending into the fuselage, and said one element being removable to use said portion to rub over said humps and cause rotation of said propeller.

2. As an article of manufacture, a toy shaped to simulate an airplane, including an imitation fuselage having a series of interruptions along the surface thereof and also having an opening therein, a rotatable propeller carried by the fuselage, and a tail skid having an elongated shank extending into said opening which when removed serves as a rubber over said interruptions to cause rotation of said propeller.

3. As an article of manufacture, a toy shaped to simulate a vehicle, including a body part having a series of interruptions along a part thereof, a rotatable member carried by said body part, and a removable projecting element in simulation of a vehicle part and having a shank which may be used to rub over said interruptions and cause rotation of said member.

4. As an article of manufacture, a toy shaped to simulate a vehicle, including a body part having a series of interruptions along a part thereof, a rotatable member carried by said body part, said body part having an opening therein, and a projecting element in simulation of a vehicle part having a shank concealed in said opening and which upon removal may be used to rub over said interruptions to cause rotation of said member.

5. As an article of manufacture, a toy structure shaped in simulation of a vehicle and fabricated from a plurality of parts each in simulation of a part of the vehicle, certain of said parts being rotatable, certain of said parts having a series of interruptions therealong, certain of said parts having an opening therein, and one of said parts being removable and having a shank extending in said opening which upon removal may be used to rub over said interruptions and cause rotation of the rotatable part.

6. As an article of manufacture, a toy structure shaped in simulation of a vehicle and having a series of interruptions along a part thereof, a rotatable member on said structure, and a part of said structure being removable and carrying a rod-like portion which may be used to rub over said interruptions and cause rotation of said member.

7. As an article of manufacture, a toy structure shaped in simulation of a vehicle and having a series of interruptions on a part thereof, movable means carried by said structure, and an elongated member of the proper shape and attached to said structure in a manner to simulate a part of the vehicle, said member being removable to function as a rubber over said interruptions to cause movement of said means.

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