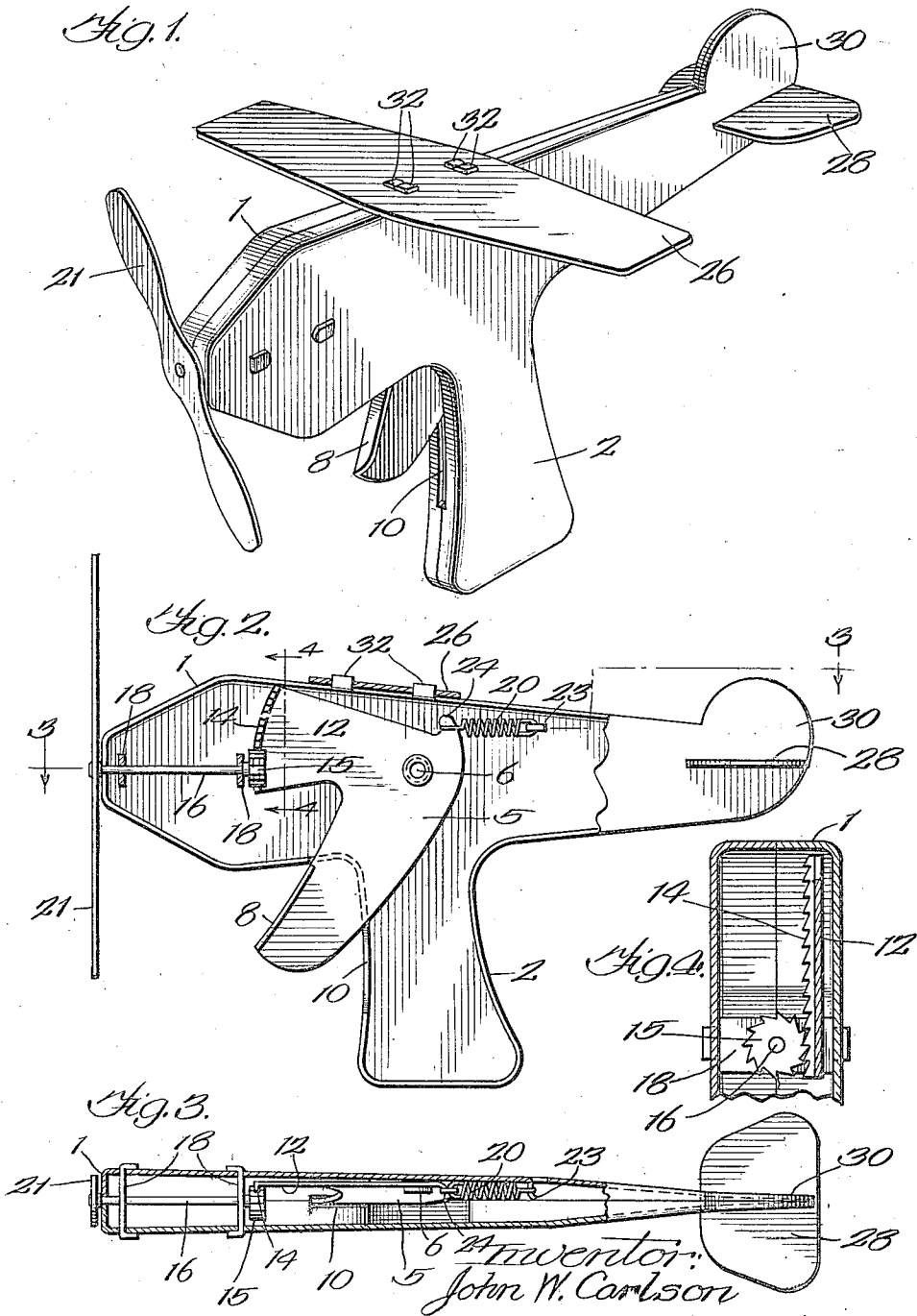


J. W. CARLSON.
TOY.

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Inventor:
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UNITED STATES PATENT OFFICE.

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OF CHICAGO, ILLINOIS, A PARTNERSHIP COMPOSED OF JOHN W. CARLSON, DAVID
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TOY.

1,422,833.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN W. CARLSON, a subject of the King of Sweden, having declared my intention to become a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Toys, of which the following is a specification.

My invention relates to toys, and is incorporated in a small device which may be grasped in the hand and which combines characteristics of an airplane and a pistol. The object of the invention is to coordinate these two well known but totally dissimilar devices in a single toy and to provide mechanism whereby the trigger of the quasi pistol will operate the propeller of the quasi airplane. I obtain my objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the complete toy.

Figure 2 is a side elevation with part of the case removed to reveal the internal mechanism.

Figure 3 is a plan section on the line 3—3, Figure 2 and

Figure 4 is a vertical section on the line 4—4, Figure 2.

Like numerals denote like parts throughout the several views.

The frame of the device is constructed preferably of pressed sheet metal or fibre and in the form shown has a portion 1 which simulates the body of the airplane and to a certain extent the cylinder and barrel of a pistol and a portion 2 which simulates the grip or handle of a pistol. The frame is formed in two halves parting along a vertical median plane, the halves being dished or hollowed whereby they form a housing for the operating parts. Within the housing thus formed is a stationary pin 6 on which is loosely mounted a trigger 5 which projects out through a slot 10 in the casing and is provided with a finger rest 8 for convenience of manipulation. Integral with the trigger is an arm 12, provided with a segmental ratchet 14 adapted to engage a ratchet wheel 15. Wheel 15 is rigidly fastened to a shaft 16 which is journaled in cross bars 18 and projects out through the front of the frame where it carries a revolving element 20 made

approximately in the form of a propeller blade. A tension spring 22 is anchored to the housing at the point 23 and at the forward end engages a finger 24 formed at the top of the trigger. This spring constantly tends to reset the trigger to normal position.

As the trigger is loosely mounted upon pin 8, it possesses considerable side play. The ratchet teeth of the segment 14 face downward while the adjacent teeth of the ratchet wheel 15 point upward. The result is that when the segment is ascending, the bevel of the teeth will throw the segment to one side and permit it to rise without engaging the wheel 15. When, however, the trigger is pulled and the segmental ratchet 14 descends, the obliquity of the teeth will cause them to mutually engage, the result being that the descending ratchet will rotate the wheel and propeller.

In order to enhance the impression of an airplane, a plate 26 is fastened to the top of the housing, this plate being approximately lozenge shape when viewed from above, and imparting to the device the appearance of a monoplane. A plate 28 is fastened in horizontal position at the rear end of the frame and projects laterally on both sides and is generally so formed and placed as to present the appearance of the elevator or vertical rudder of an airplane. A vertical fin 30 is also formed at the rear to represent a rudder and still further simulate an airplane.

In operation, the user grasps the handle 2 and presses his forefinger against the front of the trigger 8. By simply pulling the trigger, the segmental ratchet 14 is caused to descend, the shape of the teeth bringing it into active engagement with the ratchet wheel 15. This downward movement of the ratchet causes the wheel to rotate rapidly and produces a corresponding rotation of the propeller blade 20. On account of the inertia of the rotating parts, the fact that the trigger is loosely hung on its bearing 6, and the further fact that the ratchet teeth act as cams to cause the segmental ratchet teeth to disengage on the return movement of the trigger, it follows that when the user releases the trigger and permits the spring 20 to return it to normal position, the propeller keeps on rotating without interference from the returning trigger. The propeller and parts attached thereto continue to rotate, the

result being that the user may pull the trigger a second time and impart a second impetus to the rotating part. By rapidly repeating this operation, the propeller may
 5 continue to rotate at a high speed, thus creating the impression of an airplane in flight and affording a source of amusement to children.

It will be seen that the parts are simple
 10 and durable, and may be cheaply made, as most of them are simply stampings. The two halves of the case are preferably held together by integral tongues 32, which project up through suitable apertures in the
 15 wing plate 26. By bending these fingers outward, they form a secure lock for holding the parts together. The cross braces 18 which form bearings for the propeller shaft 16, are simply light metallic bars which project through the sides of the housing and are
 20 bent over at the ends as best shown in Figures 3 and 4.

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

1. A toy having a body with a hand grip approximating that of a pistol, and a revolving blade approximating the propeller of an airplane, an actuator pivoted to the body
 30 and resembling a trigger, said actuator being adapted to be manually operated and being pivoted to the body so as to oscillate in a plane passing through the axis of the propeller, and a ratchet device operatively connecting the trigger and the propeller for
 35 rotating the latter when the trigger is oscillated, said ratchet device constituting a one-way transmission whereby the oscillation of the trigger drives the propeller
 40 ways in the same direction.

2. A toy having a body presenting the combined outline of an airplane and a pistol, the body being hollow and containing a shaft which projects out through the front
 45 of the body, a propeller fastened to the projecting portion of the shaft, a trigger pivoted within the body and having a projecting portion, and being loosely mounted to have a lateral movement as well as an angular one about its pivot, a ratchet wheel fastened to the shaft, and a ratchet fastened to the trigger, the ratchet being adapted to engage the ratchet wheel when the projecting
 50 portion of the trigger is pulled, and the teeth of the ratchet and ratchet wheel camming each other out of engagement on the return motion of the trigger.

3. A toy having a hollow body having a horizontal portion to represent the body of

an airplane and a depending central portion
 60 to represent the handle of a pistol, a rotatable propeller at the forward end of the body, a propeller shaft, an oscillating trigger, a ratchet wheel fastened to the shaft, a segmental ratchet fastened to the trigger
 65 and adapted to descend in engagement with the ratchet wheel when the trigger is pulled, and adapted to ascend, disengaged from the ratchet wheel when the trigger is released, and a spring for returning the trigger to
 70 normal position.

4. A toy having a hollow body provided with a horizontal portion to represent the body of an airplane, and a depending central portion to represent the handle of a pistol,
 75 a rotatable propeller at the forward end of the body, a propeller shaft, a ratchet wheel fastened to the shaft, an oscillating trigger arranged chiefly in a vertical plane and adapted to oscillate about a horizontal
 80 pivot within the body, a segmental ratchet on the trigger adapted to descend in engagement with the ratchet wheel when the trigger is pulled, and a spring for returning the trigger to normal position and camming
 85 the teeth of the ratchet out of engagement with the ratchet wheel, whereby the propeller blade may continue to rotate in the forward direction.

5. In a device of the class described, a
 90 housing consisting principally of two chambered members of similar outline meeting edge to edge, integral tongues projecting from the meeting edges, and a plate adapted to seat upon the housing and having apertures for receiving the tongues whereby
 95 when the tongues are inserted through the apertures and bent laterally they lock the plate to the chambered members and the chambered members towards each other.

6. In a device of the class described, a housing consisting principally of two chambered members of similar outline meeting edge to edge, a propeller shaft chiefly within the housing and projecting out through it, a
 105 propeller blade mounted on the shaft outside the housing, means for rotating said shaft, and means for supporting said shaft, the supporting means consisting of a plurality of bars projecting out through apertures in the opposite sides of the housing, the bars being apertured to form bearings for the shaft, and said bars being bent at their ends to engage the sides of the housing to lock the same together.

In witness whereof, I have hereunto subscribed my name.

JOHN W. CARLSON.