Nov. 11, 1924. 1,514,602

F. A. CHARLAND

CAPTIVE AEROPLANE TOY

Filed March 2, 1923 2 Sheets-Sheet 1

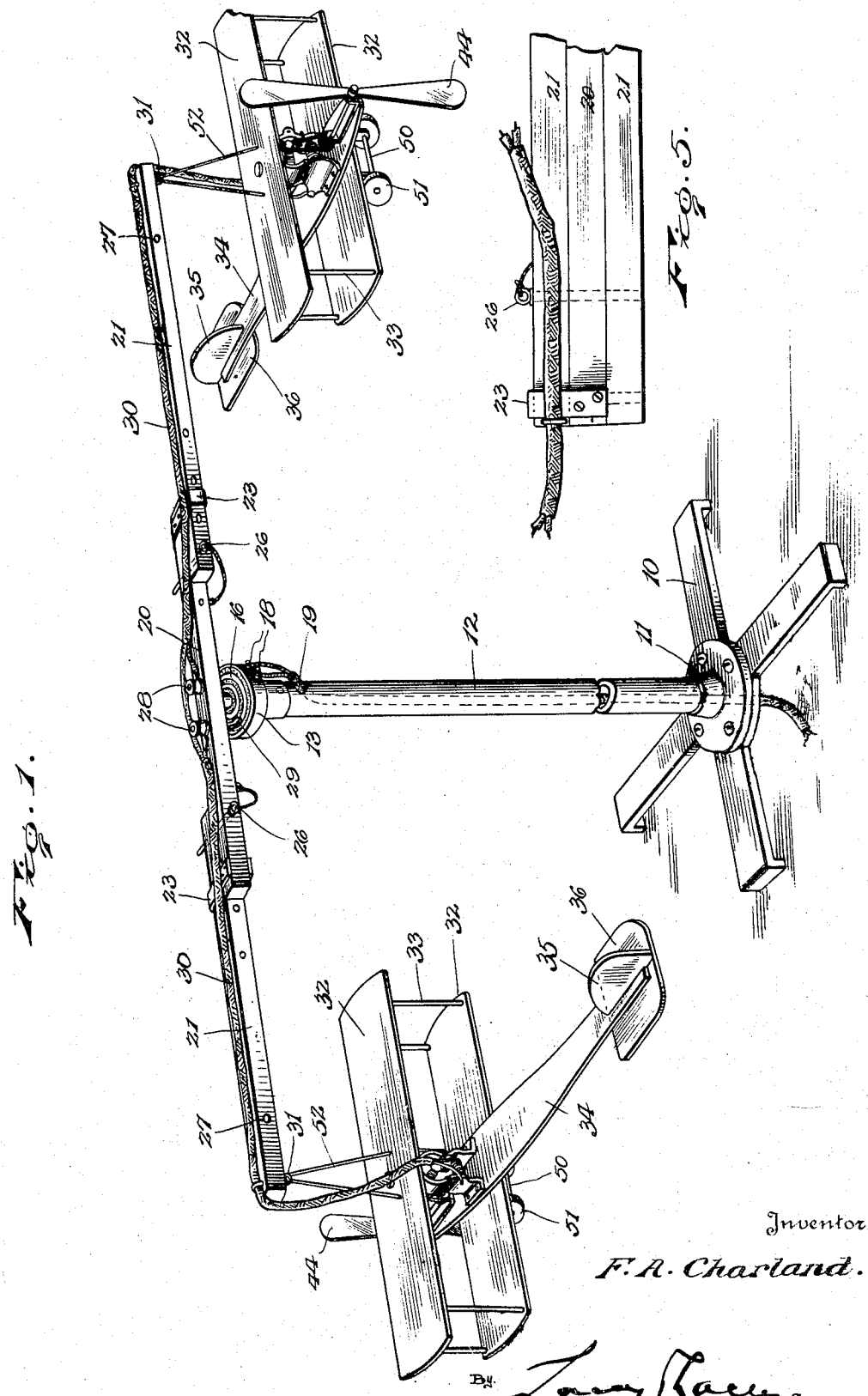


Fig. 1.

Fig. 5.

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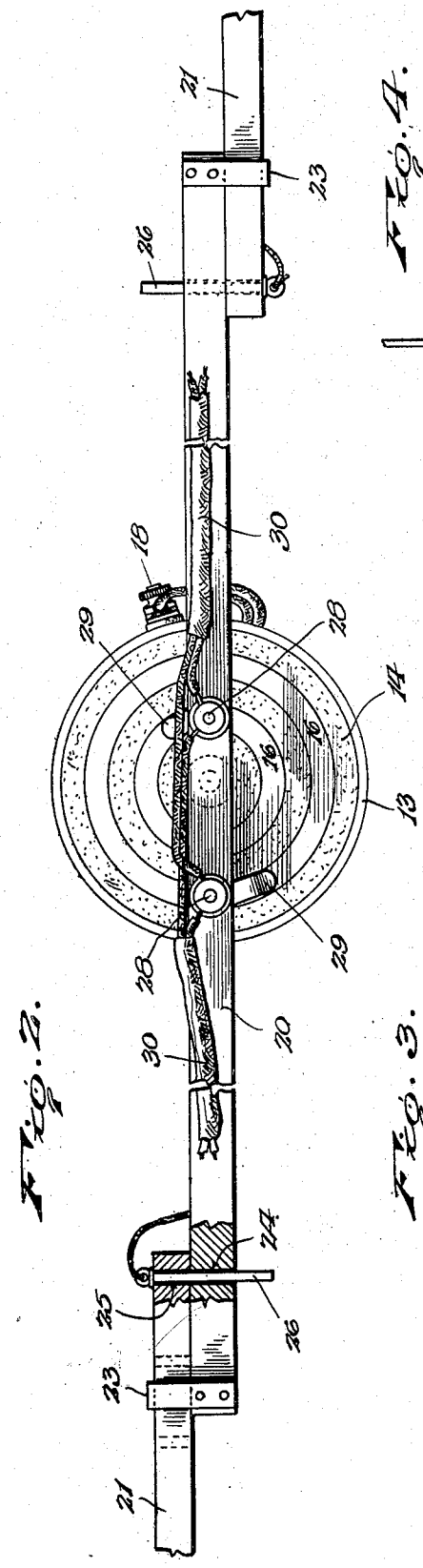


Fig. 2.

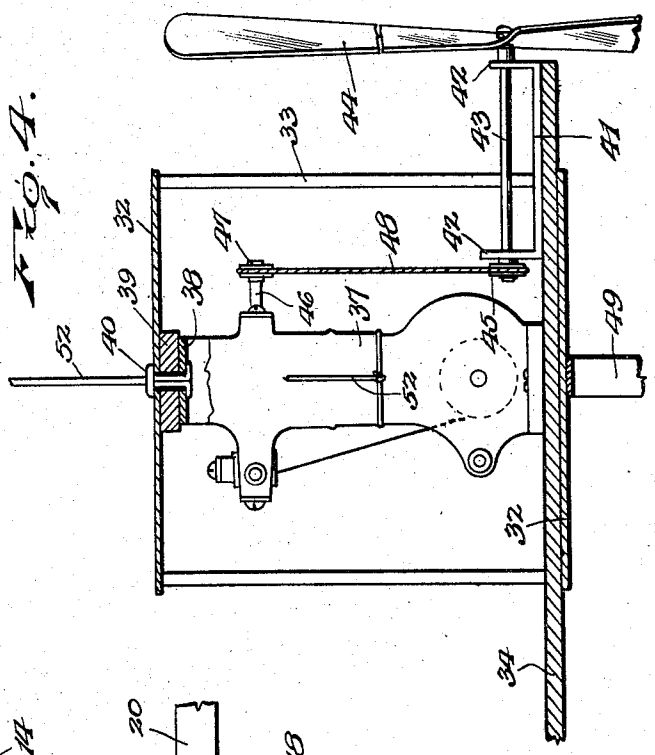


Fig. 4.

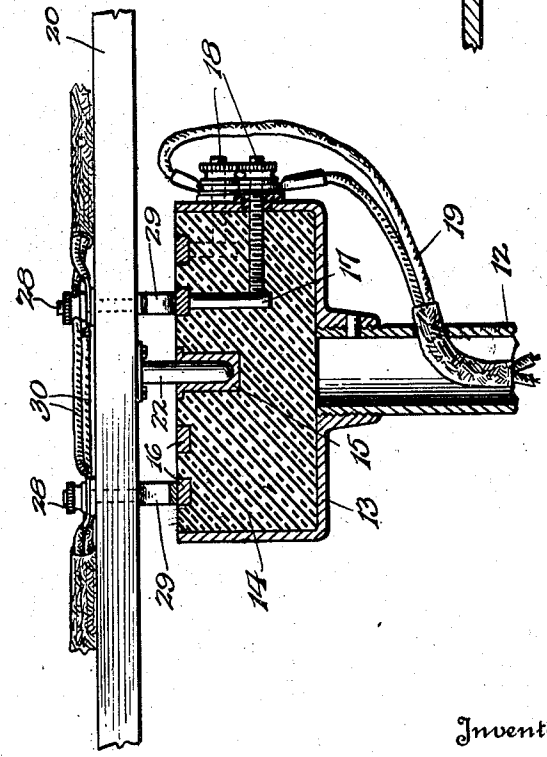


Fig. 3.

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UNITED STATES PATENT OFFICE.

FREDERICK A. CHARLAND, OF LYNDONVILLE, VERMONT.

CAPTIVE-AEROPLANE TOY.

Application filed March 2, 1923. Serial No. 622,382.

To all whom it may concern:

Be it known that I, FREDERICK A. CHARLAND, citizen of the United States, residing at Lyndonville, in the county of Caledonia and State of Vermont, have invented new and useful Improvements in Captive-Aeroplane Toys, of which the following is a specification.

This invention relates to a captive aeroplane toy and seeks, among other objects, to provide a toy embodying a rotatable beam carrying a pair of toy aeroplanes at the ends thereof so that upon rotation of the propellers of the aeroplanes, the aeroplanes will be caused to travel in a circular path revolving the beam.

A further object of the invention is to provide a device wherein the length of the beam may be readily adjusted so that the toy made be used in a small room as well as a large room and wherein the beam may further be collapsed so that the device may be conveniently packed or stored.

And the invention has as a still further object to provide a toy wherein the aeroplane propellers will be motor driven and wherein novel means will be provided for supplying current to the motors.

Other and incidental objects will appear hereinafter.

In the drawings:

Figure 1 is a perspective view of my improved toy,

Figure 2 is a top plan view particularly showing the beam of the device,

Figure 3 is a vertical sectional view through the head of the supporting post for the beam,

Figure 4 is an enlarged sectional view taken through one of the aeroplanes of the device, and

Figure 5 is a fragmentary plan view showing the beam collapsed.

In carrying the invention into effect, I employ a supporting stand embodying a base 10 and secured upon the base is a socket 11. Removably threaded at its lower end in said socket is a tubular upstanding post 12 and threaded upon the upper end of said post is a cylindrical shell 13 fixed against rotation. Tightly fitting in the shell is an insulating block 14 and sunk into said block axially of the post is a socket 15. Embedded in the upper face of the insulating block in concentric relation to said socket are contact rings 16 from which depend pins 17 projecting downwardly within the block and extending through the shell into the block to engage said pins are binding posts 18 appropriately insulated with respect to the shell. Leading upwardly through the base and through the post 12 are circuit wires 19 brought out through a suitable opening near the upper end of the post and connected to the binding posts 18.

Rotatably mounted upon the stand is an extensible beam which, as best shown in Figures 1 and 2 of the drawings, is formed of companion sections 20 and 21. Fixed to the section 20 medially thereof is a stud 22 removably fitting in the socket 15 rotatably mounting the beam, and connected to the ends of said section are U-shaped guide members 23 receiving the sections 21 of the beam therethrough slidably connecting said sections with the section 20. Near its ends, the section 20 is provided with openings 24 while at their inner end portions the sections 21 are provided with a plurality of longitudinally spaced openings 25 adapted to be selectively brought into registration with the opening 24 to receive locking pins 26 therethrough. Thus, the sections 21 may be adjusted longitudinally with respect to the section 20 for varying the length of the beam. Furthermore, as will be perceived, the sections 21 may, as shown in Figure 5, be shifted to register at their ends with the ends of the section 20 for collapsing the beam, when corresponding openings at the inner end portions of the sections 21 will register with the openings 24 of the section 20 and formed in the sections 21 near their outer ends are openings 27 to also register with the openings 24 of the section 20 so that the pins 26 may be inserted through the registering openings of the three sections for locking the beam collapsed. Preferably, the pins 26 are connected with the middle section 20 by short lengths of chain or other suitable fastening elements to prevent the accidental loss of said pins. Mounted upon said section at opposite sides of the plane of the stud 22 are binding posts 28 to the lower ends of which are connected spring contacts or brushes 29 cooperating with the rings 16 respectively and connected to the upper ends of the posts are circuit wires 30 appropriately secured to the end sections of the beam extending beyond the ends of the beam. Depending from the outer ends of the sections 21 of the beam

are hooks 31. Flexibly connected with the ends of the beams are miniature aeroplanes each including spaced parallel wings 32 connected by corner struts 33. The wings may be of cardboard or the like and appropriately secured to the lowermost wing is a rearwardly directed fuselage member 34 slotted to accommodate a vertically disposed rudder 35 while to the lower face of the member is secured a horizontally disposed rudder 36. Screwed or otherwise secured at its lower end upon the member 34 between the wings 32 is an electric motor 37, the frame members of which are connected at their upper ends by a plate 38. Interposed between said plate and the top wing is a filler block 39 and extending through said block and through the plate is a clip 40 securing the motor at its upper end. Mounted upon the forward end of the member 32 in front of the motor is a U-shaped bearing bracket 41 provided at its ends with lugs 42 and journaled through said lugs is a propeller shaft 43 to the forward end of which is fixed a propeller 44 while to the rear end of said shaft is fixed a pulley 45. The drive shaft of the motor 37 is indicated at 46. This shaft carries a pulley 47 similar to the pulley 45 and trained around said pulleys is a belt 48. Thus, the belt will operatively couple the motor with the propeller shaft 43 for driving the propeller 44. Secured against the bottom wing beneath the motor is a U-shaped bracket 49 on which is journaled an axle 50 carrying landing wheels 51 and extending through the top wing at opposite sides of the clip 40 is a cord or other suitable flexible element 52, the ends of which are, as shown in Figure 4, secured to the side members of the frame of the motor 37. The cord thus forms a suspension loop and, as shown in Figure 1, the loops of the aeroplanes are removably engaged with the hooks 31 at the ends of the beam flexibly connecting the aeroplanes with the beam while the ends of the circuit wires 30 are secured to the terminals of the motors of the aeroplanes, the aeroplanes balancing and facing in opposite directions. Accordingly, when the circuit through the wires 19 is closed, current will flow through these wires to the motors of the aeroplanes, the wires 19 being connected with the wires 30 upon the supporting beam through the rings 16 and brush contacts 29. Rotation of the propellers 44 will, of course, serve to set the aeroplanes in motion so that the supporting beam will be revolved carrying the planes in a circular path.

Having thus described the invention, what is claimed as new is:

1. A captive aeroplane device including a post, a shell mounted upon the upper end of the post, a block of insulating material mounted in said shell, a socket embedded in said block, a beam having a stud fitting in said socket revolubly supporting the beam, motor driven toy devices connected with the ends of the beam, contact rings embedded in the upper face of the block and provided with pins extending into the block, binding posts extending through the shell into the block to engage said pins, circuit wires connected to said posts, binding posts extending through the beam and provided at their lower ends with brush contacts cooperating with said rings, and circuit wires extending between the upper ends of the latter posts and the motors of said toy devices.

2. A captive aeroplane device including a stand, a beam revolubly mounted upon the stand and formed of a central section and end sections slidable upon the central section, guide members mounted upon the central section freely receiving the end sections therethrough whereby the end sections may be shifted to extended position projecting beyond the ends of the central section, pins removably extending through the sections locking the end sections in extended position, and toy devices suspended from the outer ends of the end sections of the beam.

In testimony whereof I affix my signature.

FREDERICK A. CHARLAND. [L. S.]