Dec. 6, 1932. G. D. FULL 1,889,982

TOY AEROPLANE BANK

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Fig. 1.

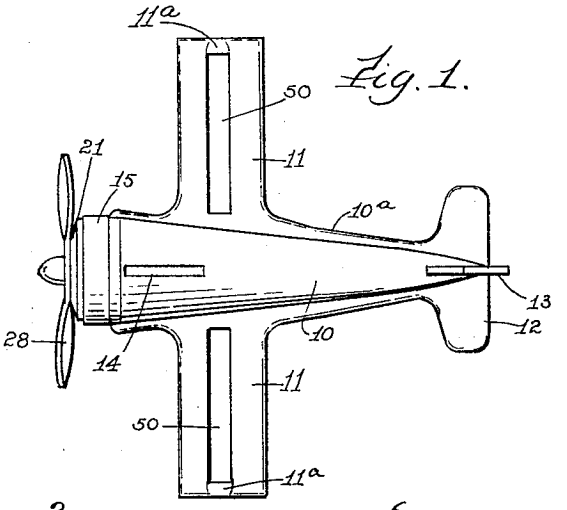


Fig. 2.

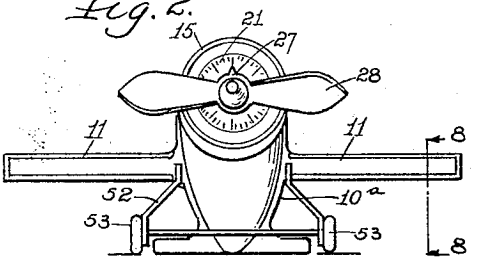


Fig. 3.

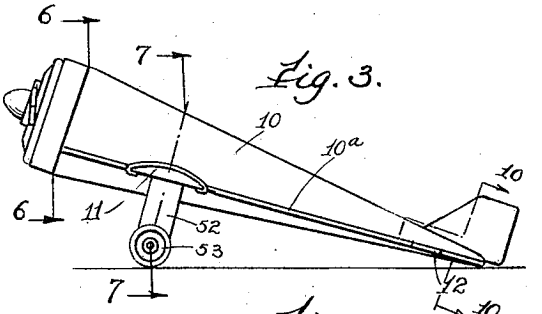


Fig. 5.

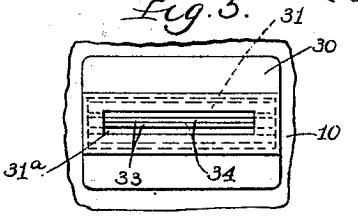


Fig. 6.

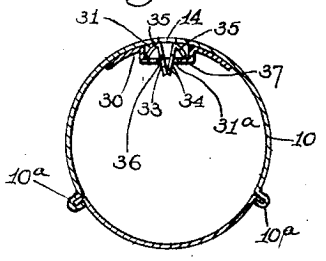


Fig. 8.

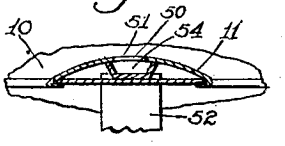


Fig. 10.

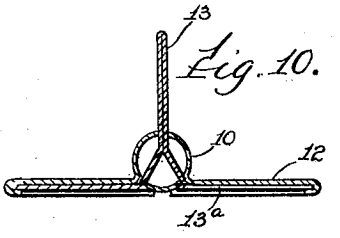
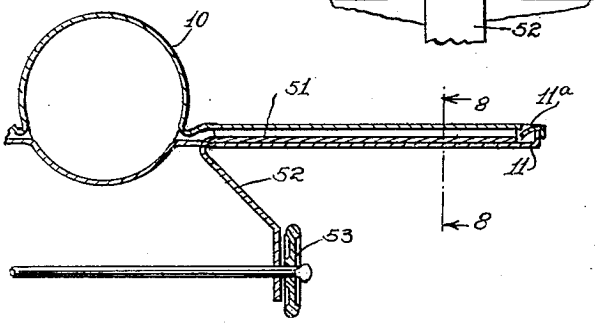


Fig. 7.



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TOY AEROPLANE BANK

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Fig. 1.

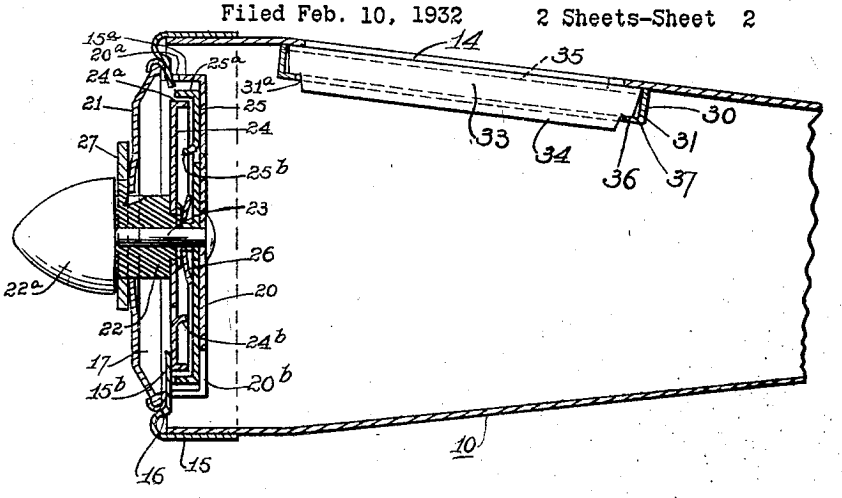


Fig. 11.

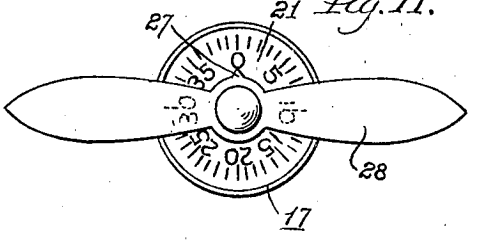


Fig. 13.

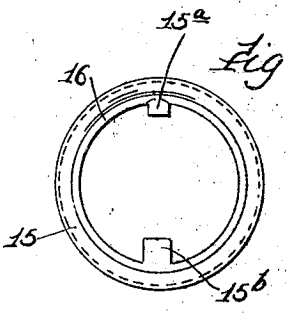


Fig. 12.

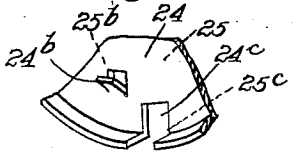
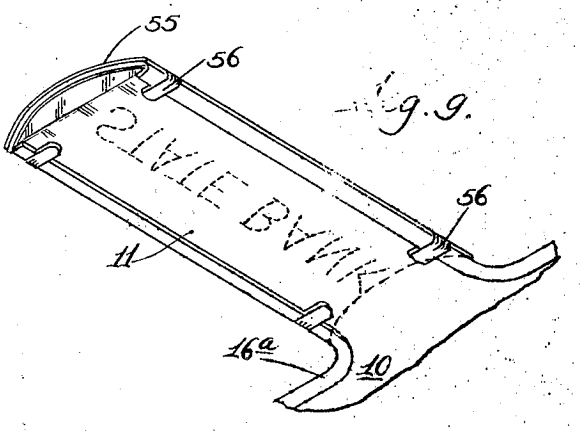


Fig. 9.



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his Attorneys.

Patented Dec. 6, 1932 1,889,982

UNITED STATES PATENT OFFICE

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TOY AEROPLANE BANK

Application filed February 10, 1932. Serial No. 592,039.

This invention relates to a portable savings bank, and one of its objects is to provide a novel device of this character formed as a toy aeroplane which includes a hollow fuselage adapted to serve as the savings compartment, access to which is had under control of a lock mechanism. Another object is to provide a device of this character with a permutation lock mechanism at the forward end of the fuselage, and utilizing the propeller for setting the tumbled disks in a predetermined arrangement for releasing the lock mechanism, and affording access to the savings compartment. Another object is to provide in the toy aeroplane design, a novel wing construction for displaying a name or any desired advertising data by means of a removable plate or the like. A still further object is to provide an improved coin slot control to prevent discharge of the coins through the slot. The invention consists in certain features and elements of construction, as herein shown and described, and as indicated in the claims.

In the drawings:

Figure 1 is a plan view of a savings bank constructed as a miniature aeroplane, embodying the present invention.

Figures 2 and 3 are front and side elevations respectively.

Figure 4 is an enlarged vertical section through the forward end of the fuselage.

Figure 5 is a fragmentary view from the interior of the fuselage looking at the coin slot control.

Figure 6 is a transverse section through the coin slot control, taken substantially as indicated at line, 6—6, on Figure 3.

Figure 7 is a transverse sectional view through one wing and body, taken at line, 7—7, on Figure 3, showing the formation of the undercut groove in the wing for accommodating a name plate or other advertising data.

Figure 8 is a transverse section through the wing taken as indicated at line, 8—8, on Figure 7.

Figure 9 is a perspective view showing the attachment of an auxiliary plate for displaying the name or other advertising data on the upper surface of the wing.

Figure 10 is a transverse section through the rear end of the fuselage showing the rudder and tail in section.

Figure 11 is a face view of the lock mechanism and propeller assembled therewith.

Figure 12 is a fragmentary perspective view of one of the tumbler disks of the lock mechanism.

Figure 13 is a view of the bezel ring.

In order to cultivate the saving habit, particularly in children, it has been found desirable to design and construct portable savings banks in attractive forms. In the present invention I have produced a savings bank in the form of a miniature aeroplane so that it may be used as a toy or plaything by the child and because of such use will tend to keep the child interested and the bank itself will thus assist in cultivating the saving habit.

Referring in detail to the drawings, the aeroplane shown embodying the present invention is more or less diagrammatic and is not proportional to conventional aeroplane specifications. The aeroplane includes a hollow fuselage or body indicated at 10, which is substantially circular in cross section, and tapers from the front to the rear end. The body for convenience in manufacture is formed of two pieces of sheet metal with portions of their marginal edges crimped as indicated at 10^a, at the opposite sides of the fuselage body, and at the same time producing a pair of laterally extending wings, 11, and horizontal rudders, 12, at opposite sides of the body, with the vertical rudder, 13, having leg portions, 13^a, clamped between the folded portions of said rudders, 12. This hollow fuselage serves as a savings compartment and is provided adjacent the forward end,—preferably on the upper side,—with a coin slot indicated at 14 through which coins or paper currency may be inserted. Secured to the forward or open end of the fuselage by means of solder, welding etc., is a bezel ring, 15, which is formed with an annular seat or recess, 16, to accommodate a unitary lock mechanism assembly indicated generally at 17. This lock mechanism substantially occupies and controls the opening at the front

end of the fuselage through which access is had to the savings compartment.

The lock mechanism as seen in the drawings is comparatively simple in construction, including a casing, 20, of cup shape formation, the marginal edges of which are crimped around the marginal edges of a graduated dial, 21. Journaled for rotation in the dial is a hub element, 22, which is fixedly secured on a stud, 23, journaled in the back well of the casing part, 20. Rigidly secured to the inner end of the hub portion, 22, for rotation therewith is a cup shaped master tumbler, 24, by which rotation is imparted to the other cup shaped tumbler, 25, which is journaled for rotation on the stud, 23. These tumbler elements are of disk form having their outer peripheries flanged as indicated at 24^a and 25^a, respectively, with the flange of one of the tumbler disks nested or telescoped within the flange of the other tumbler disk. Said tumbler disks are provided with inter-engaging driving lugs which are herein shown in the nature of tangs, 24^b and 25^b, respectively, stamped out of said tumbler disks, by means of which the tumbler disk, 24, imparts rotation to the tumbler, 25, for adjusting it in a predetermined arrangement. The tumbler disks are each provided with peripheral notches, 24^c and 25^c, respectively which are adapted to be aligned to permit removal of the lock mechanism from the fuselage, affording access to the savings compartment. It is to be understood that the fragmentary showing of a tumbler in Figure 12, represents either of the tumblers, 24 or 25. Interposed between the tumbler disks is a spider spring element, 26, tending to separate said tumbler disks. The outer end of the hub portion, 22, is formed as a cone, to which is rigidly secured an indicating element or pointer, 27, which is adapted to register with the graduations of the dial, 21, in setting up the tumblers in a predetermined arrangement. This indicator is rigidly associated with the cone of said hub, 22, and is an integral part of the propeller element, 28, by means of which rotation is imparted to the master tumbler, 24, for setting up the lock combination.

It may be understood that the unitary lock mechanism herein shown could if desired be hinged to the fuselage so that it would swing away from the opening and afford access to the compartment, but for simplicity of construction I have chosen for purpose of illustration an arrangement wherein the lock mechanism is bodily removable from the fuselage. In this construction I form the bezel ring with a downwardly projecting lug, 15^a, which is adapted to register with an aperture, 20^a, formed in the upper edge of the wall of the lock casing, 20. Diametrically opposite the lug, 15^a, is an upstanding projection or lug, 15^b, with respect to which the tumblers are adjusted with their notches, 24^c and 25^c, registered in alignment therewith so as to permit removal of the lock mechanism. To accommodate such movement the lock casing is also provided with a notch indicated at 20^b, which is in alignment with the projection, 15^b, of the bezel ring. By forming the tumbler elements with peripheral flanges it will be manifest that they are considerably reenforced, and by telescoping one into the other the added strength positively prevents any possibility of forced withdrawal of the lock mechanism without damage to the projecting lugs, 15^a or 15^b, of the bezel ring. It will be apparent that after the combination of the lock has been adjusted by turning the propeller proper amounts in the respective directions for aligning the indicator, 22, with certain graduations of the dial the lock mechanism may be swung outwardly from the lower end with the upper end temporarily hinging on the lug, 15^a, until the lock mechanism is clear of the bezel ring at which time it may be withdrawn clear of the lug, 15^a, of the bezel ring.

I have also provided an improved coin slot control for savings banks which includes a housing bracket, 30, welded, soldered or otherwise secured to the inner surface of the fuselage in alignment with the coin slot, 14, as seen in Figures 4 and 5. Said housing is formed to provide a chamber, 31, in which is confined a pair of guard plates, 33, each of which is formed with a depending leg, 34, the upper ends of which terminate in oppositely extending transverse legs, 35. The ends of the depending legs, 34, of the guard plates are formed with shoulders, 36, seated on a transverse shelf portion, 37, of the housing bracket, 30, with the extreme lower portions of the depending legs extending through a slot, 31^a, in said housing bracket. It is to be understood that the legs of the guard plates are dimensioned and proportioned so that normally the lower edges of the depending legs, 34, of the respective guard plates are caused to assume abutting relation, as seen in Figure 6. Thus when a coin is inserted, these guard plates are forced to separate at the lower edge, but because of the center of mass of these guard plates being out of center with respect to their point of support, they tend to assume a position with their lower edges in abutting relation, closing access to the slots, 14 and 31^a. As will be seen from Figure 6, because of the nature of the support of the guard plates on the shoulder, 36, these guard plates are permitted a limited amount of lateral shifting, which in effect provide a floating pivot. Thus when the body of the fuselage is twisted at an angle to vertical, one or the other of the guard plates will shift over so that the transverse leg portion, 35, will cover the coin slot, 14, and thus preclude the discharge of coin from the savings compartment.

Because a device of this character may be desirably employed by banking institutions or the like, wherein a saving bank is loaned or given to the respective depositors to assist in cultivating the saving habit, it has been found desirable to avoid considerable expense in making up special dies and tools for the embossing or imprinting the names of each individual institution, and I therefore provide a construction wherein the name of the institution may be quickly applied to a stock savings bank. For this purpose the hollow wings, 11, have an elongated slot, 50, formed in the upper plate, beneath which registers the continuation indicated at 51, of the supporting strut, 52, for the wheels, 53. This continuation, 51, is formed as a trough, as seen in Figure 8, with the edges abutting the under surface of the upper plate of the wing slightly beyond the marginal edges of the slot, 50, so as to form an undercut groove indicated generally at 54. Any suitable name plate or label may be inserted in the groove and may be permanently secured therein if desired in a conventional manner. To facilitate the insertion of such name plates the outer edge of the wing adjacent the end of the slot, 50, is slightly depressed as indicated at 11a.

A modified form of construction for applying the names of banking institutions or advertising data to a savings bank of this character is shown in Figure 9, wherein I provide a supplemental plate, 55, substantially the same size and shape as the aeroplane wing, 11, and superimpose it upon said wing. This plate may have embossed, painted or otherwise applied, the name of the banking institutions or any other suitable advertising data. Said supplemental plate is provided with a plurality of tangs, 56, at its marginal edges which are adapted to be crimped over the marginal edge of the wing, as seen in the drawings, and preferably the under surface of the wing is depressed at proper places along the marginal edges so as to accommodate the tang, 56, and thereby lock the supplemental plate against accidental displacement.

Although I have shown and described a preferred embodiment of my invention, I am aware that it is capable of modification and rearrangement of parts without departing from the spirit and scope thereof. I do not therefore wish to be understood as limiting myself to the particular construction herein shown and described except as indicated in the appended claims.

I claim:

1. A savings bank in the form of a miniature aeroplane, having a hollow fuselage serving as the savings compartment and provided with a slot through which coins may be inserted, the forward end of the fuselage being formed with an opening, a permutation lock mechanism mounted in said opening, said lock mechanism including a dial having outwardly exposed characteristics designating certain positions of adjustment of the tumbler mechanism, and a propeller journaled with respect to said dial and adapted for imparting rotation to the tumbler disks, said propeller having an indicating character associated therewith for registration with the designating characteristics of the dial face for adjusting the tumblers in a predetermined combination to release said lock and permit access through said opening to the savings compartment in the fuselage.

2. A savings bank in the form of a miniature aeroplane, having a hollow fuselage serving as the savings compartment and provided with a slot through which coins may be inserted, the front end of the fuselage being formed with an opening to afford access to said compartment, and a permutation lock mechanism mounted in the opening with the forward end of the fuselage serving as a casing for the lock mechanism, said lock mechanism including a plurality of tumbler disks, a graduated dial disposed substantially central with respect to the forward end of said fuselage, a propeller journaled with respect to the dial and adapted for imparting rotary motion to the tumbler disks, and an indicator associated with the propeller for registration with the graduations of the dial in setting the tumbler disks in combination, whereby said lock mechanism may be moved away from said opening to afford access to the savings compartment.

3. A savings bank in the form of an aeroplane having a hollow fuselage serving as a savings compartment and provided with a slot through which coins may be inserted, the forward end of the fuselage being formed with an opening, permutation mechanism mounted in said opening, said mechanism including a plurality of tumbler disks, and a propeller journaled axially with respect to said disks and having a driving connection for adjusting them in a predetermined arrangement for permitting release of the permutation mechanism to afford access through said opening to the savings compartment in the fuselage, said propeller and fuselage being provided with indicating features which are adapted to be registered in the initial or starting position preparatory to setting up the tumbler disks in their predetermined arrangement.

4. In a savings bank including a hollow body having a slot through which coins may be inserted, check means for controlling the slot including a housing bracket secured in the body adjacent the slot, and a pair of bodily movable cooperating guard plates confined within said housing bracket, each of said guard plates including a depending leg and a transverse leg extending laterally

from the upper edge of said depending leg, said guard plates being supported at their ends with the transverse legs extending in opposite directions, said legs of the respective guard plates being proportioned so that normally the lower portions of said depending legs are caused to abut each other, said depending legs of the guard plates having shoulders at opposite ends resting upon a transverse supporting surface of the bracket to provide floating pivots for said plates which permits bodily movement thereof in lateral directions.

5. In a miniature aeroplane having a fuselage and a pair of wings extending laterally from opposite sides of the fuselage; one or both of said wings being formed with an undercut groove for accommodating a sheet of material bearing a name or other data.

6. In a miniature aeroplane having a fuselage and a pair of wings extending laterally from opposite sides of the fuselage; said wings being of hollow formation and having a slot formed therein extending transversely of the fuselage, and supporting members each including a depending leg for the supporting wheels and a transversely extending portion disposed in the hollow wings in registration with the slots, said portions of the supports being bent in trough form and having their marginal edges engaging the inner surface of the wings at opposite sides of the marginal edges of said slots.

7. A savings bank in the form of an aeroplane having a hollow fuselage serving as a savings compartment and provided with a slot through which coins may be inserted, the forward end of the fuselage being formed with an opening, a closure member for controlling said opening, releasable means for normally maintaining the member in closed position, and a rotatable propeller having journal support on said closure member and arranged to acutate said releasable means.

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