F. C. RICE.

PUZZLE BOX.

APPLICATION FILED FEB. 9, 1916.

1,254,538. Patented Jan. 22, 1918.

Fig 1

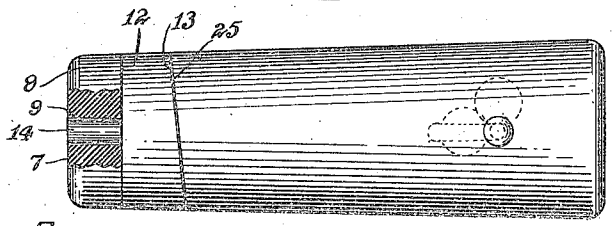


Fig 6

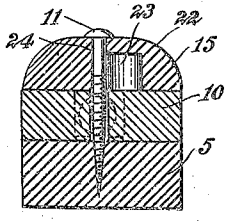


Fig 2

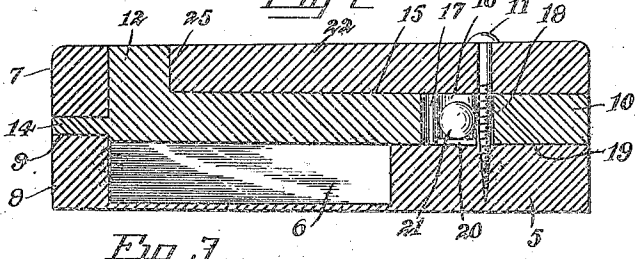


Fig 3

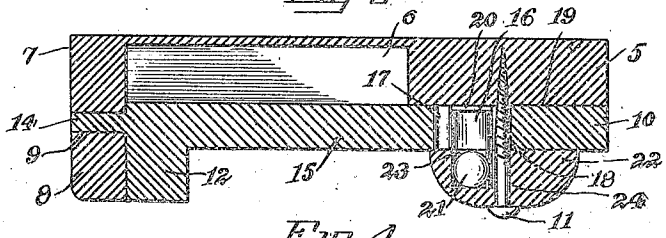


Fig 4

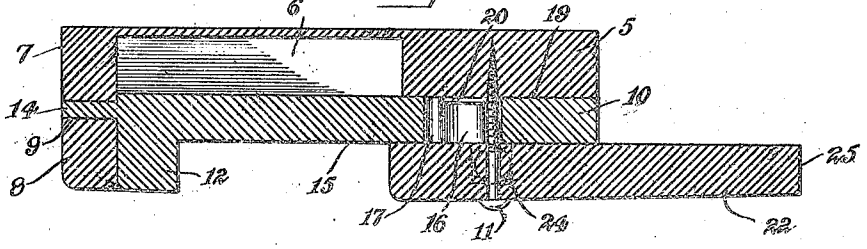
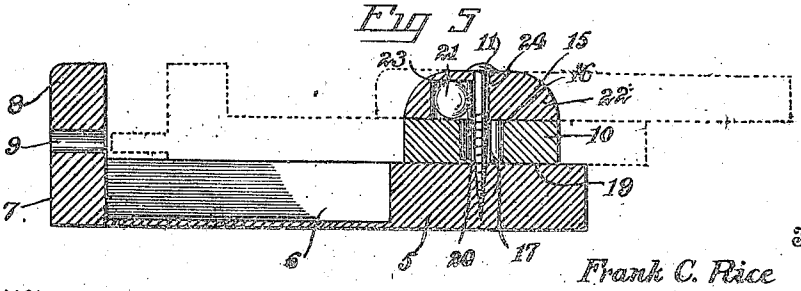


Fig 5



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UNITED STATES PATENT OFFICE.

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PUZZLE-BOX.

1,254,538. Specification of Letters Patent. Patented Jan. 22, 1918.

Application filed February 9, 1916. Serial No. 77,225.

To all whom it may concern:

Be it known that I, FRANK C. RICE, a citizen of the United States, residing at Newport, in the county of Newport and State of Rhode Island, have invented new and useful Improvements in Puzzle-Boxes, of which the following is a specification.

The present invention relates to improvements in puzzle boxes and the primary object of the same is to provide a novel form of locking mechanism for the box closure to prevent the latter from being opened by persons not familiar or having any knowledge of the combination for the box.

A further object of the invention is the provision of a device of the above stated character wherein the box cover is formed with a longitudinally projecting pin adapted for engagement in an opening formed in an upstanding tongue of the box to prevent the rotation of the cover previous to the unlocking of the same.

With the above and other objects in view, the invention consists in the novel features, details of construction and combination of parts which will hereinafter be more fully set forth, illustrated in the accompanying drawing and pointed out in the appended claim.

Figure 1 is a side elevation of the box partly broken away showing the lid of the box in a closed and locked position;

Fig. 2 is a longitudinal sectional view of the box showing the lid in a locked position;

Fig. 3 is a similar view showing a portion of the lid shifted; and

Fig. 4 is a view similar to Fig. 3, showing the shifted position of the lid in a different position from that shown in Fig. 3.

Fig. 5 is a similar view showing a further adjustment of the lid of the box.

Fig. 6 is a vertical sectional view.

Referring more specifically to the accompanying drawing, in which like characters of reference refer to corresponding parts in the several views, 5 designates the body portion of the box of elongated form and provided in its upper face with a recess or cavity 6 adapted to contain small articles of ornamentation and value such as jewelry, previous stones and the like. The forward end 7 of the body portion 5 of the box is extended above the plane thereof to provide the same with an upstanding tongue 8 having a central circular opening 9, the purpose of the opening of the tongue will be hereinafter clearly set forth. I provide for the box a movably mounted lid 10 pivotally connected to the upper surface of the body portion by means of a pivot 11 which in this particular instance is in the form of a screw. The forward end of this lid 10 is provided with an upstanding abutment 12 having its inner face 13 dove-tailed, the purpose of which also will be fully brought out when describing the operation of the opening and closing of this lid. On the outer face of this abutment 12 is formed a longitudinally extending pin 14, said pin being of circular contour in cross section and of a diameter slightly less than the diameter of the opening 9 whereby the said pin will protrude through the opening for holding the closure against swinging or rotative movement upon its pivot 11. Formed in the upper face 15 of the lid at a point adjacent the rearmost end 15 thereof and in the longitudinal center thereof is a pocket 16 of annular formation and the walls forming the pocket are formed with diametrically opposed semi-annular recesses 17 and 18, the under surface 19 of the lid being provided with a longitudinally extending elongated slot 20 which is of a length equaling the longitudinal extent of the semi-annular recesses and said pockets whereby the pivot 11 will pass through the elongated slot 20 and be seated in one of the semi-annular recesses in order to clear the pocket 16, the purpose of which being to prevent any binding action of the specific locking bolt 21 within its pocket, whereas the elongated slot 20 will permit of a free longitudinal movement of the lid 10 a distance equaling the distance of the slot, upon the removal of the spherical locking ball 21 from its pocket 16. In order to accommodate the removal of the spherical locking member 21 from its pocket and to effect the unlocking of the lid 10, I provide a cover plate 21 having formed on the inner surface a pocket 23, said pocket being of annular formation and disposed to one side of the longitudinal center of the cover plate. The opening 24 formed in the cover plate 22 permits of the passage of the pivot 11 and retains the same out of and flush with the contour of the pocket 23 which further serves the purpose of not obstructing the dropping of the spherical locking member 21 within the pocket upon

the complete turning of the cover plate in registration with the pocket 16. The forward end 25 of the cover plate 22 is also dove-tailed and snugly engages with the dove-tailed portion 13 thereby permitting of the swinging of the cover plate 22 in one direction only in effecting the opening or closing of the lid 10. To open the lid 10 of the box it is necessary that the said lid as well as the cover plate 22 be in a closed position with the pin 14 engaging in the opening 9. The box is then inverted and the cover plate is swung on its pivot 11 in the direction of the arrow shown in Fig. 1 until the cover plate has been turned a distance to a three-fourths turn of its complete revolution whereby the pocket 23 will be brought into registration with the pocket 16 and the lid 10 may then be slid longitudinally to a distance equaling the length of the slot 20 and seating the pivot 11 within the opposite semi-circular recess 18. During such operation the pin 14 will be removed from the opening 9 and the lid may be swung upon the pivot 11 to an open position thereby permitting access to the recess or cavity 16 formed in the body portion 5 of the box.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of construction and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principles of operation of the device together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such advantages may be made when desired as are within the scope of the claim appended thereto.

I claim:

A box of the character set forth comprising a body portion provided on its forward end with an upstanding apertured tongue, a lid therefor provided on its forward end with a pin adapted to engage in the opening of the tongue upon the locked position of said lid, said lid having a pocket formed therein and opening out through the upper face thereof, and the side walls forming the pocket being provided with diametrically disposed recesses intersected at their lower ends by a slot formed in the bottom of the pocket, a cover plate having a pocket formed in the under face thereof for the reception of a spherical member, a pivot pin passing through the cover plate to one side of its pocket and protruding through the slot formed in the bottom wall of the pocket of the lid and adapted to engage with one of the recesses of the lid pocket upon the swinging of the cover plate to a distance equaling three-fourths portion of its complete revolution to dispose the pivot in non-obstructing relation with respect to the spherical locking member to displace the spherical locking member from the pocket of the cover lid into the pocket of the cover plate and causing the displacement of the pin from the said tongue.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK C. RICE.

Witnesses:
EDWIN S. BURDICK,
A. L. SLOCUM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."