No. 822,032. PATENTED MAY 29, 1906.

I. J. WESTBY.

SAFETY BOX.

APPLICATION FILED JUNE 10, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

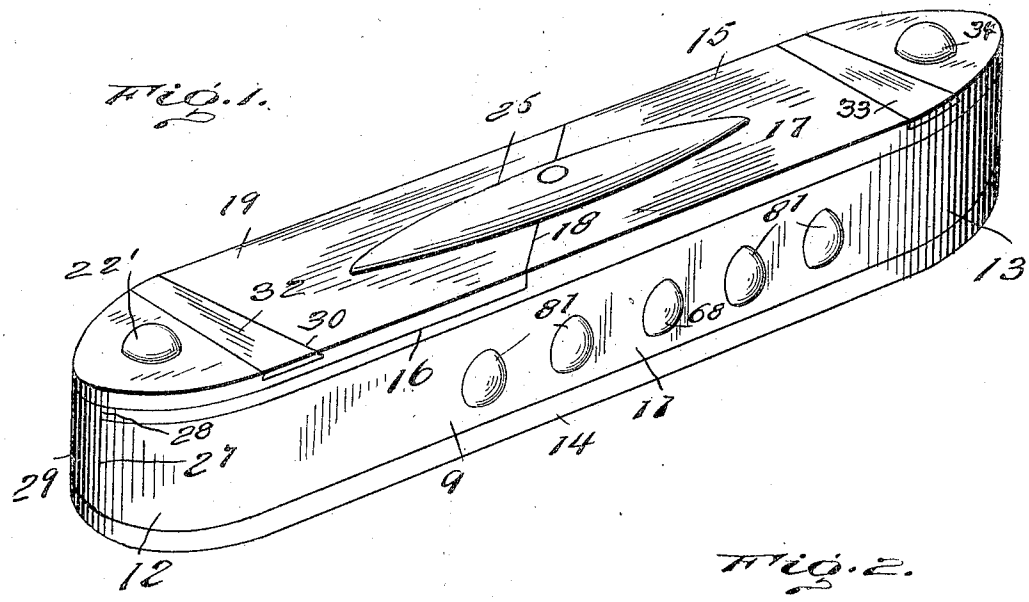
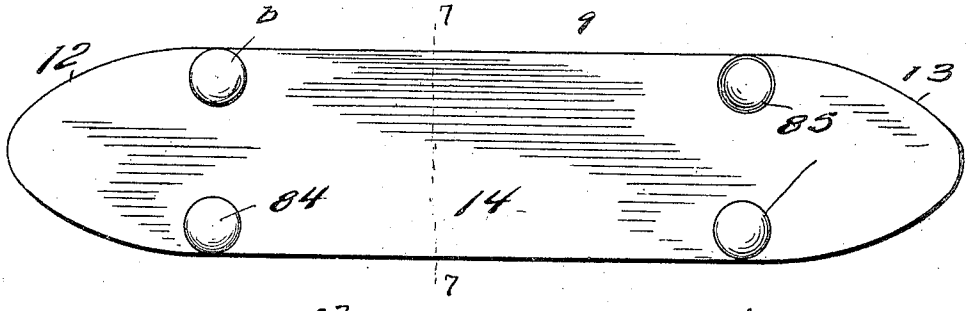


Fig. 2.



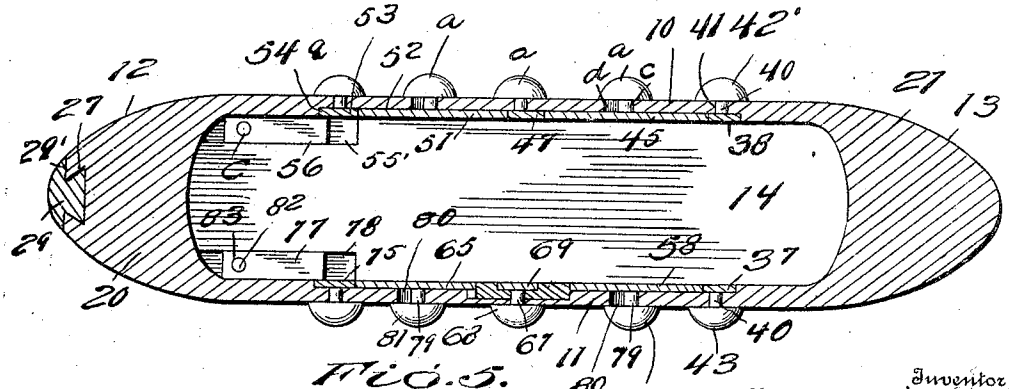


Fig. 5.

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3 SHEETS—SHEET 2.

Fig. 3.

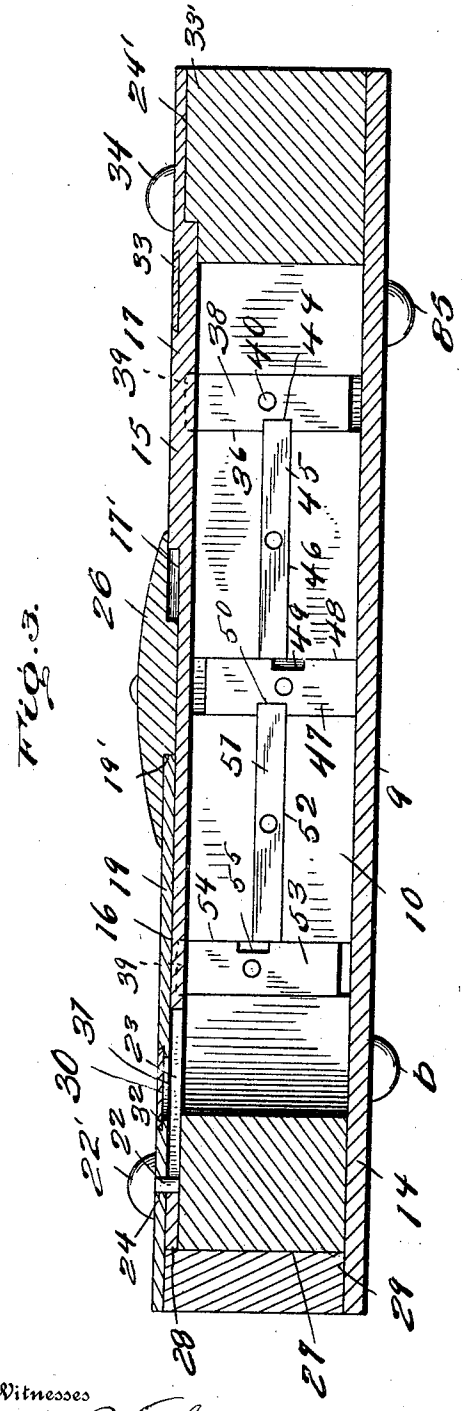
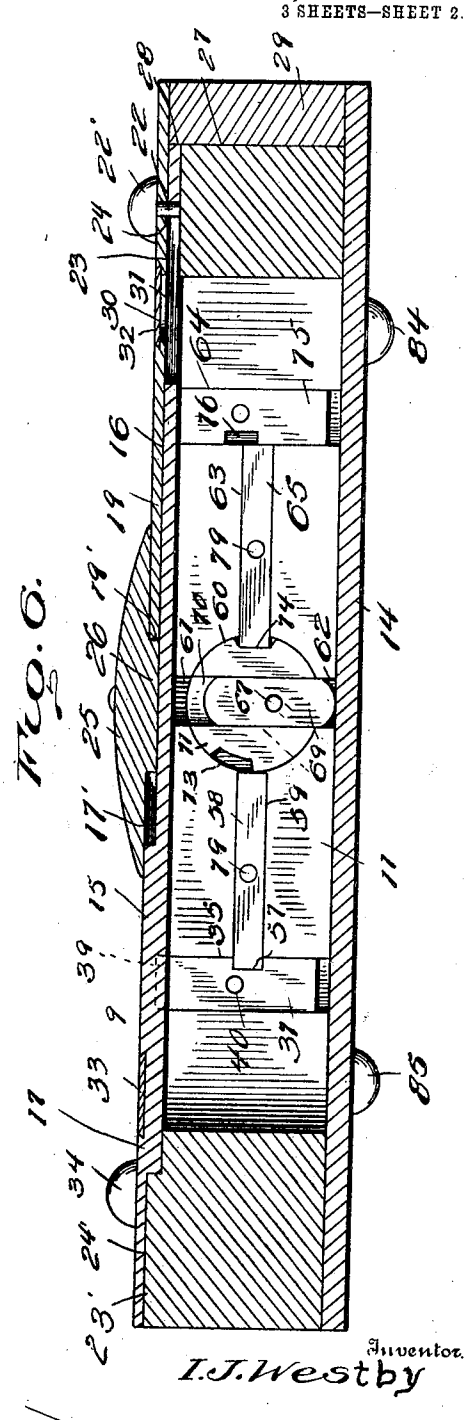


Fig. 6.



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3 SHEETS—SHEET 3.

Fig. 4.

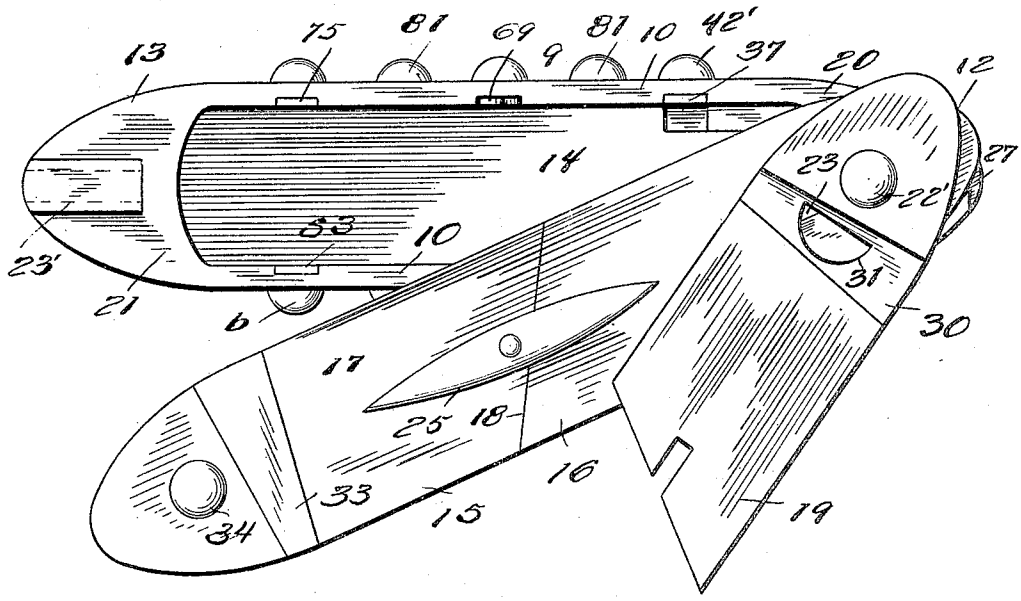


Fig. 7.

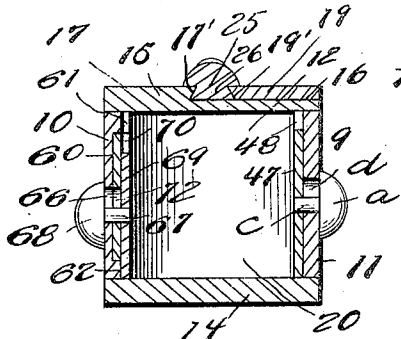
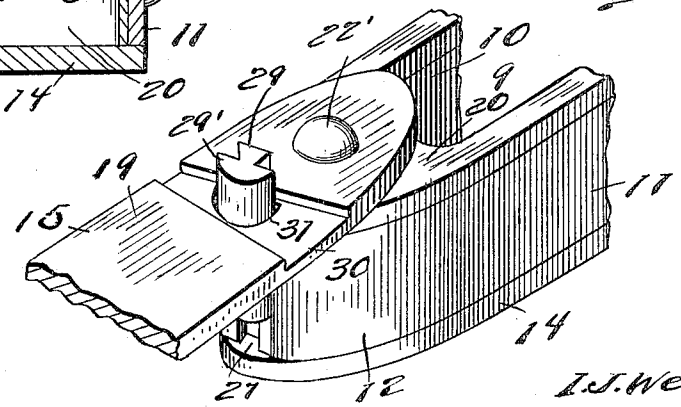


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

INGOLF J. WESTBY, OF KINLOSS, NORTH DAKOTA.

SAFETY-BOX.

No. 822,032. Specification of Letters Patent. Patented May 29, 1906.

Application filed June 10, 1905. Serial No. 264,696.

To all whom it may concern:

Be it known that I, INGOLF J. WESTBY, a citizen of the United States, residing at Kinloss, in the county of Walsh, State of North Dakota, have invented certain new and useful Improvements in Safety-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to boxes, and more particularly to safety-boxes, and has for its object to provide a box equipped with a locking mechanism which may only be operated by those familiar with the method of doing so, another object being to provide a box of this kind which will form, in effect, a puzzle.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific construction shown and described may be made within the scope of the claims and that any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification and in which like characters of reference indicate similar parts in the several views, Figure 1 is a perspective view of the present box. Fig. 2 is a bottom plan view. Fig. 3 is a central longitudinal section. Fig. 4 is a view of the box in top plan, showing the cover in inoperative position. Fig. 5 is a section on line 5 5 of Fig. 1, taken horizontally through the side operating-buttons. Fig. 6 is an elevation showing the inner surface of the wall opposite to that shown in Fig. 3. Fig. 7 is a central transverse section on line 7 7 of Fig. 2. Fig. 8 is a detail perspective view of one end of the box, showing the locking-slide partially removed.

Referring now to the drawings, the present invention includes a body portion 9, which in plan has a form of an elongated oval and which includes side walls 10 and 11 and curved ends 12 and 13. The body portion is open at its top and is provided with a bottom 14. A top 15 is provided, which consists of a plate the thickness of which is reduced about one-half throughout substantially half the length of the plate, as shown at 16, the unreduced portion 17 of the top ending in a diagonal transversely-extending face 18. A supplemental plate 19 is provided and lies upon the reduced portion 16 of the top and with its upper face flush with the portion 17 thereof, the inner end of the plate 19 being cut to fit against the face 18.

Solid portions 20 and 21 are left at the ends 12 and 13 of the body portion, respectively, and the former of these solid portions has an upwardly-extending pin 22, which is engaged in a longitudinal slot 23, formed in the reduced portion 16 of the top, and in a perforation 24, formed in the plate 19, both the top and the plate being revoluble upon the pin and the top being also slidable upon the pin. A longitudinal extending dovetail rib 23′ is formed upon the solid portion 21 and is adapted for engagement in a corresponding groove 24′, formed in the under surface of the top at the opposite end from the slot 23 and opening through this end, and the top is movable slidably upon the pin 22 to bring the rib 23′ into and out of engagement with the groove 24′, and it will be apparent that when the rib is in the groove the top is held against pivotal movement upon the pin 22, and it will also be seen that when the plate 19 is in its normal position the top is held against sliding movement upon the pin.

Registering dovetail grooves 17′ and 19′ are formed in the portion 17 of the top and the plate 19, respectively, and an elongated button 25 is provided, having a depending dovetail rib 26, which is slidably engaged in the grooves 17′ and 19′, the button resting upon the flushed surfaces of the portion 17 and the plate 19 to cover the grooves, the latter extending longitudinally of the top, and the button is movable to bring the rib 26 wholly within the groove 17′ or partially within this groove and partially within the groove 19′, and when in this last-named position the rib 26 holds the plate 19 against swinging movement into position to permit of sliding movement of the top 15.

A vertically-extending dovetail groove 27 is formed in the extremity of the end 12 of the body portion and is closed at its lower end by the bottom 14, and a dovetail notch 28, formed in the outer end of the reduced portion 16 of the top, registers with the groove 27 when the top is in its operative position for the reception of a vertically-movable dovetail locking-slide 29, which also acts to hold the top against sliding movement, and when the plate 19 is in normal position a portion thereof projects over the notch 28 to prevent removal of the slide 29.

The plate 19 has a transverse groove 30 in

its upper face adjacent to and inwardly of the perforation 24, and formed through the bottom of this groove there is an opening 31, which is of a size to permit of the passage of the locking-slide 29 therethrough, and the plate 19 may be swung to bring this opening 31 above the slide 29, so that the latter may be removed. A filling-piece 32 is provided for the groove 30 and is in the form of a rib which extends somewhat above the surface of the plate 19, and a similar rib 33 is located at the opposite end of the top, so that the two ribs have the appearance of being simply decorations for the box, and the button 25, lying in its normal position at the center of the top, also appears to be a decoration. The pin 22 is provided with a button 22′ at its top, and a corresponding button 34 is located at the opposite end of the top of the box.

The dovetail slide 29 has flanges 29′ resting against the end of the body portion at the sides of the groove 27 and being curved to complete the curvature of the end of the box, and this outer surface of the slide is decorated to disguise the fact that it is movable, the other end of the box being similarly decorated.

Formed in the inner surfaces of the side walls 10 and 11 of the box there are grooves 35 and 36, respectively, and these grooves have slidably engaged therein vertically-movable latches 37 and 38, respectively, which may be moved to bring their upper ends into and out of engagement with recesses 39, formed in the under surface of the top 15, to hold the top against movement with respect to the body portion. These latches have outwardly-extending stems 40, which are slidably engaged in vertical slots 41, formed in the sides of the body portion, and the latches 37 and 38 have buttons 42′ and 43, respectively, upon the outer ends of their stems 42, by which they may be moved. The latch 38 has a notch 44 in one of its sides, which when the latch is in operative position lies in position to receive one end of a horizontally-disposed rod 45, which is slidably mounted in a longitudinal groove 46, formed in the inner surface of the wall 11, this rod being movable to bring its end into and out of engagement with the notch.

A vertically-movable plate 47 is slidably engaged in a vertical groove 48, with which the groove 46 communicates, and this plate has a notch 49, adapted for the reception of the other end of the rod 45, the plate being movable into and out of position to receive the end of the rod 45 in its notch. In the opposite edge of the plate 47 from the notch 49 there is a notch 50, which when the plate is out of position to receive the rod 45 in its notch 49 lies in position to receive the end of a second rod 51, which is mounted similarly to the rod 45 in a groove 52. A plate 53 is mounted similarly to the plate 47 in a groove 54 and has a notch 55, which lies in position to receive the adjacent end of the rod 51 when the plate 53 is at the downward limit of its movement, the plate extending over the end of the rod 51 when at the upward limit of its movement to hold the rod in engagement with the notch 50. The bottom 14 of the body portion has a groove 55′ therein, which extends beneath the plate 53, and slidably mounted in this groove there is a member 56, which is movable into and out of position to lie beneath the plate 53 to hold the latter at the upward limit of its movement.

When it is desired to lock the latch 38 in its operative position, it is moved upwardly, after which the rod 45 is moved into engagement with the notch 44. The plate 47 is then moved downwardly and lies in position to prevent return movement of the rod 45 and with its notch 50 in position to receive the rod 51. The rod 51 is then moved into the notch 50, and the plate 53 is raised to prevent return movement of the rod 51, after which the member 56 is slid beneath the plate 53 to hold the latter in its raised position. The method of unlocking the latch will be readily understood without further description. Each of the moving portions 45, 47, 51, and 53, is provided with an operating-button *a*, these buttons lying upon the outer surface of the wall 11 and being arranged with the button 43 in a longitudinal series and having the appearance of decorations upon the box. The member 56 is provided with an operating-button *b*, which forms a foot for the box and lies beneath the bottom 14, and these buttons are carried by stems *c*, which are secured in the several moving portions and which are slidable in slots *d*, as shown.

The latch 37 has a notch 57 in one of its sides, which is adapted to receive one end of a sliding rod 58, disposed in a horizontal groove 59 in the inner surface of the side wall 10, and this rod is arranged to hold the latch in its operative position when the rod is in the notch. The groove 59 at the opposite end from the latch 37 communicates with a circular recess 60, with which communicate upwardly and downwardly extending grooves 61 and 62, respectively, and another horizontal groove 63 lies in alinement with the groove 59, communicating at one end with the recess 60 at the opposite side from the groove 59, and at its other end with a vertical groove 64, these several grooves and the recess being formed in the inner surface of the side wall 10. A rod 65 is slidably disposed in the groove 63 and is movable to lie at times at one end projected into the groove 64 and at times with its other end projected into the recess 60. A slot 66 is formed in the wall 10, extending vertically and communicating with the recess 60.

A pin 67 is revolubly and slidably mount-

ed in the slot 66, a button 68 being mounted upon the outer end of this pin and corresponding to the buttons *a* described above. Mounted upon the inner end of the pin 67 there is a dovetail slide 69, which is slidably engaged in a groove 70, formed in the inner surface of a disk 71, which is revolubly disposed in the recess 60, this disk having a slot 72, which registers at times with the slot 66 to permit of vertical movement of the slide 69, and the arrangement is such that the slide may be moved to project its opposite ends alternately into the grooves 61 and 62 to hold the disk against rotation or to lie wholly within the recess 60 to permit of rotation of the disk. The disk has notches 73 and 74, respectively, in its periphery, and when the slide 69 is in position to hold the disk against rotation the disk lies with an unnotched portion of its periphery against an end of the rod 58 to hold the latter in the notch 57, thus retaining the latch 37 in operative position, and when the disk is in this position just described it lies with its notch 74 in position to receive an end of the rod 65, and when the rod is thus engaged in the notch 74 the disk is further held against rotation. A plate 75 is slidably engaged in the groove 64 for vertical movement, and when at the downward limit of its movement this plate lies with a notch 76 formed in one of its edges in position to receive the other end of the rod 65 to permit of movement of the rod out of engagement with the notch 74. When the plate 75 is at the upward limit of its movement, it lies in the path of movement of the rod 65 to hold the latter against disengagement from the rod 74, and to hold the plate 75 in its last-named position a member 77 is provided, which is slidably engaged in a groove 78, formed in the upper surface of the bottom 14, and this member 77 is disposed for movement to lie beneath the plate 75.

The rods 58 and 65 are provided with stems 79, which are slidably engaged in slots 80, formed in the wall 10, and which are provided at their outer ends with buttons 81, by means of which the slides may be moved. The plate 75 is provided with devices by which it may be moved and which correspond with the just-described devices. The member 77 has a stem 82, which extends downwardly through a slot 83 and which has a button 84 upon its lower end, by which the member may be moved, and the member 56 is provided with similar elements, as mentioned above, the buttons of the two elements forming feet depending from the bottom 14, at one end thereof, and corresponding to feet 85, immovably secured to the bottom adjacent to the other end thereof. The method of opening the box will be easily understood without further description.

What is claimed is—

1. In a box the combination with a body portion open at its top, of a closure for the opening, said closure being vertically reduced throughout a portion of its length and having a longitudinal slot in its reduced portion, a pin carried by the body portion and engaged in the slot for sliding movement of the closure thereupon, a projection carried by the body portion, said closure having a groove therein, said closure being arranged for movement upon the pin to bring the projection into and out of the groove, said closure being movable pivotally upon the pin, said projection when in the groove being arranged to hold the closure against pivotal movement, a plate pivoted upon the pin and disposed upon the reduced portion of the closure, said plate being movable into and out of position to hold the closure against sliding movement, means for holding the plate in its operative position, and additional means for holding the closure against sliding and pivotal movement, said plate lying normally in position to hold said additional means in operative position.

2. In a receptacle the combination with a body portion, of a closure therefor movable into and out of operative position, a slide removably engaged in the body portion and the closure to hold the latter in operative position, a plate movably connected with the closure and lying normally in position to hold the slide in operative position, said plate having an opening for the passage of the slide therethrough and being movable to bring said opening into position to receive the slide, and a removable closure for the opening.

3. In a lock the combination with a fixed member, of a movable member connected therewith for sliding and pivotal movement, means for holding the member against pivotal movement, said member being movable slidably into and out of operative relation to said means, means movable into and out of operative position for holding the movable member against pivotal and sliding movement, means movable into and out of operative position for holding the second-named means in operative position and for holding the movable member against sliding movement and means for holding the third-named means in operative position.

4. In a box the combination with a body portion, of a closure therefor, means for holding the closure in operative position, means for holding the first-named means in operative position, means for holding the second-named means in operative position, means for holding the third-named means in operative position, means for holding the fourth-named means in operative position, means for holding the fifth-named means in operative position and additional means for holding the third-named means in operative position, the several holding means being movable into and out of operative position and finger-

pieces connected with said means for movement thereof, said finger-pieces forming a portion of the decoration upon the box.

5. In a lock the combination with a support, of a latch slidably mounted in the support, a rod slidably mounted in the support for movement into and out of position to hold the latter against movement, a disk revolubly mounted in the support for movement into and out of position to hold the rod against movement, a slide in the disk movable into and out of position to hold the disk against movement, an operating device connected with the slide and with the disk for operation thereof, a second rod movable into and out of position to hold the disk against movement, a plate movable into and out of position to hold the second rod against movement and a member movable into and out of position to hold the plate against movement.

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

INGOLF J. WESTBY.

Witnesses:
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CARL KNUTSON.