109-36 CROSS REFERENCE SEARCH ROOM

Oct. 30, 1962 M. I. GLASS ETAL 3,060,633

TOY

Filed July 11, 1960

Fig. 1

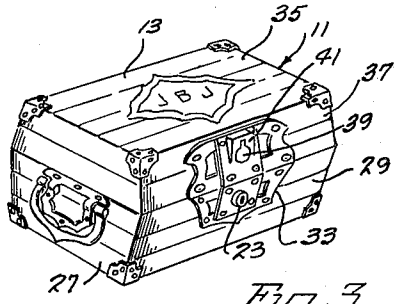


Fig. 2

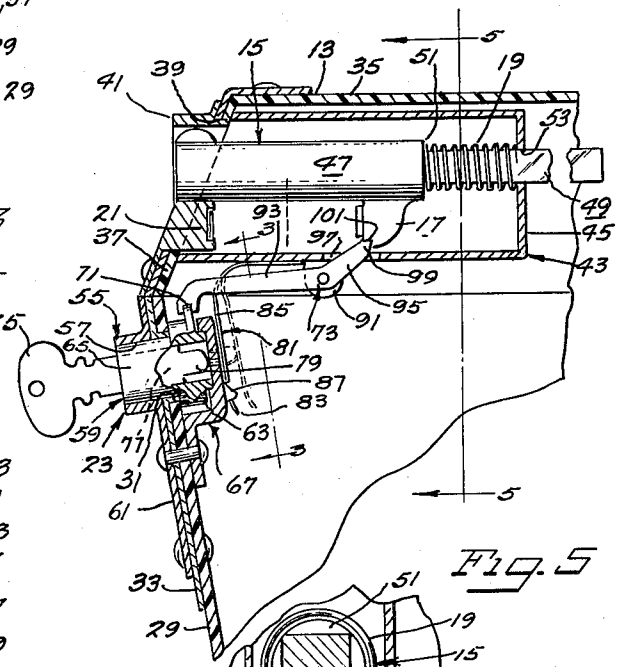


Fig. 3

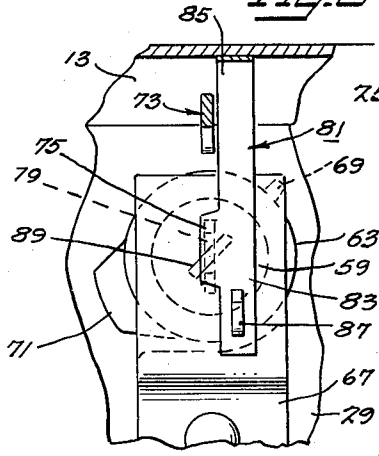


Fig. 4

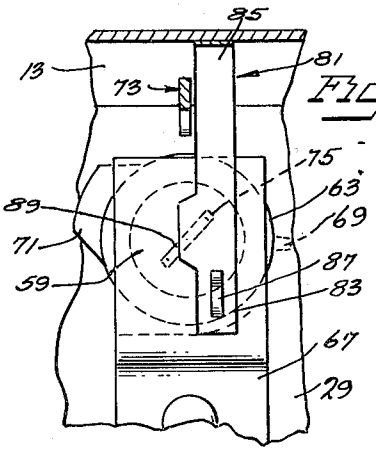
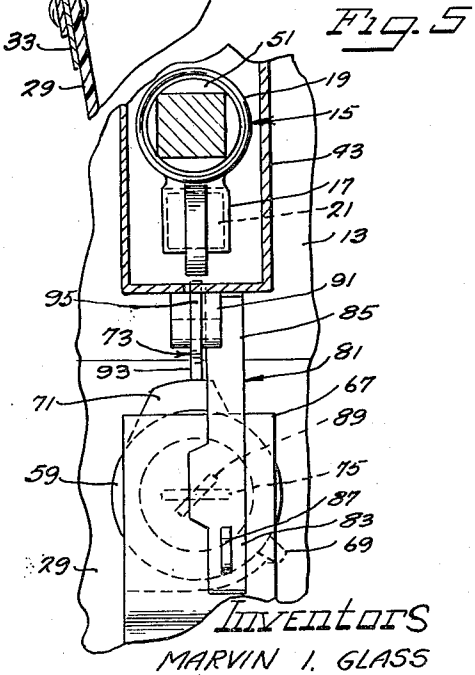


Fig. 5



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This invention relates generally to toys, and more particularly to a closable box or chest having therein means which operate, incident to an attempted opening by an intruder, to simulate the destruction of the intruder.

The principal object of the invention is to provide an amusement device for a child of the character described. An additional object of the invention is to provide a chest which is capable of storing small objects and which includes a gun barrel adapted to protrude suddenly from the chest and fire when a stranger attempts to unlock the chest. A still further object of the invention is to provide a chest having a trick lock which will trigger a concealed gun when a key is turned in the lock, but which is operable to permit opening of the chest without firing action of the concealed gun by means of a predetermined sequence of key movements.

Other objects and advantages of the invention will become apparent by reference to the following description and the accompanying drawings of one embodiment of the invention in which:

FIGURE 1 is a perspective view of a chest in accordance with the invention;

FIGURE 2 is a fragmentary view, partially in section, of the chest shown in FIGURE 1, illustrating the arrangement of the gun barrel and lock assembly within the chest;

FIGURE 3 is an enlarged view, partially in section, taken along line 3—3 of FIGURE 2 showing the relation of the elements of the lock assembly prior to the turning of the key;

FIGURE 4 is a view similar to FIGURE 3 showing the relation of the various elements of the lock assembly prior to the unlocking of the chest; and

FIGURE 5 is a view which is similar to FIGURES 3 and 4 and which is taken along line 5—5 of FIGURE 2 showing the relation of the elements of the lock assembly and the gun barrel after the gun has been triggered.

In general, the toy comprises a chest 11 having a hinged lid 13 and means concealed therein for producing a sound effect simulating the firing of a gun indicating an attempted opening of the chest. Means are also included for releasably locking the lid 13 in closed position and for causing operation of the sound producing means as a result of an improper attempt at opening the chest 11.

In the disclosed embodiment, the chest 11 includes a movable gun barrel 15 which is provided with a hammer 17 and is biased by suitable spring means 19 for forward movement outwardly through an opening in one wall of the chest. An anvil 21, adapted to support a cap, is located in the chest 11 so that forward movement of the barrel 15 causes the hammer 17 to strike the anvil and fire the cap. A locking means in the form of a lock assembly 23 releasably holds the lid 13 in closed condition and restrains operation of the cap firing action, together with forward movement of the gun barrel 15.

The lock assembly 23 is operated to open the chest 11 by turning a key 25 approximately 45° and then moving the key inwardly of the chest 11. When the lid is opened in this manner, the gun barrel 15 is restrained from cap firing movement. However, the lock assembly 23 is designed so that if the key 25 is turned beyond approximately 45° and to about 90°, the gun barrel 15 will be released to cause firing of a cap placed on the anvil 21. At the same time, the gun barrel 15 will suddenly move outwardly of the chest.

More specifically, the illustrated walled chest or container 11 has a base 27 and a suitable top wall or lid 13. The chest 11, as shown in FIGURE 1, may include various decorative devices intended to simulate the appearance of a stage coach strong box or the like. However, the chest can be made to resemble various other containers, such as a safe or a pirates' chest.

The base 27 is generally an open top container having a forward panel 29 together with suitable side and rear panels all of which extend upwardly from a bottom panel. Hinge means (not shown) are located along the upper edge of the rear panel and serve to attach the lid 13 to the base 27. An opening 31 is provided in the forward panel 29 near its upper edge to receive the lock assembly 23 which is suitably secured to the surrounding portion of the forward panel 29. Secured on the outer surface of the forward panel 29 in surrounding relation to the opening 31 is a decorative plate 33 which provides additional support for the lock assembly 23.

The lid 13 comprises a top panel 35 from which extends a forward panel 37 together with suitable side and rear panels. The lid 13 is hingedly attached to the base 27 along the lower edge of its rear panel by the hinging means previously referred to but not shown. The forward lid panel 37 includes an opening 39 which is covered by an apertured decorative plate 41 through which the gun barrel 15 is forwardly movable.

The barrel 15 is carried in the lid 13 in a sub-frame 43 which is suitably attached to the interior of the lid 13 in surrounding relation to the opening 39 of the forward panel 37 and which has a rearwardly disposed cross bar 45. However, the barrel and the supporting sub-frame can be located within the base 27 of the chest 11. The gun barrel comprises a cylindrical rod 47 which is preferably hollow and a rectangular shaft 49 extending from the rearward end of the rod 47. The width of the shaft 49 is somewhat less than the diameter of the rod 47 so as to provide a shoulder 51 which cooperates with the biasing means 19 in a manner to be described.

The gun barrel 15 is supported in the lid by disposition of the forward end of the cylindrical rod 47 in the apertured decorative plate 41 and by projection of the rectangular shaft 49 through a mating opening 53 in the cross bar 45, of the sub-frame 43. This support for the barrel prevents rotation of the gun barrel, guides the barrel for forward movement outwardly of the chest 11, and stabilizes the barrel against upward displacement.

The hammer 17 is disposed on the lower side of the gun barrel 15 and is adapted to strike the anvil 21 incident to forward movement of the gun barrel 15 under the influence of the biasing means 19. In this connection, the hammer 17 is retained in cap-firing alignment with the anvil as a result of the mating engagement of the rectangular shaft 49 with the mating opening 53 in the cross bar 45 of the sub-frame 43.

The biasing means 19 is disposed between the shoulder 59 of the gun barrel and the inner surface of the cross bar 45 of the sub-frame 43. In the disclosed construction, the biasing means 19 comprises a coil spring which is carried on the shaft 49 of the barrel 15. When released by the lock assembly 23, the biasing spring causes forward movement of the gun barrel outwardly of the chest 11 with accompanying cap firing action.

The anvil 21 is located adjacent the inner surface of the forward lid panel 37 and within the sub-frame 43 in position for striking by the hammer 17. Engagement of the hammer 17 against the anvil also serves to limit the forward movement of the barrel.

Although the description includes a biased hammer and anvil arrangement for firing a cap, various other sound producing means can be employed and cocked by a suit-

able baising means to produce a percussive report or other sound effects.

The lock assembly **23** comprises generally a housing **55** including a central bore **57** adapted to receive a cylinder **59**. The housing **55** is disposed within the opening **31** and includes a plate **61** which extends perpendicularly to the axis of the bore and is suitably fastened to the forward panel **29** of the base **27** in overlying relation to the decorative plate **33**.

The cylinder **59** is generally cylindrical and includes a head portion **63** at its inner end and an outer portion **65** of reduced diameter as compared to the head portion. The outer portion **65** is located in the bore **57** of the housing **55** while the head portion **63** prevents movement of the cylinder outwardly of the housing **55**. At its inner end, the cylinder **59** is enclosed by a bracket **67** which is suitably secured to the forward panel **29** of the base **27**.

The head portion of the cylinder includes an ear **69**, see FIGURES 3 and 4, which is engageable with a portion of the bracket **67** to limit rotation of the cylinder after release of the gun barrel **15** for cap firing activity. The head portion **63** of the cylinder **59** also incorporates on its outer surface, a cam **71** which is adapted for engagement with a trigger **73** (still to be described) for controlling movement of the gun barrel **15**. The cylinder **59** of the lock assembly **23** also includes a narrow axial extending keyhole **75** for admitting the key **25**. The key **25** includes a main stem **77** having at its outer or free end an extension **79** of reduced width.

The lid **13** is lockable in closed relation to the base **27** by a latch means **81** which includes a spring clip **83** fastened to the sub-frame **43**. The spring clip **83** is bent with a downwardly depending leg **85** which is biased against the rear surface of the bracket **67** and which includes, adjacent its free end, an aperture for receiving a lug **87** projecting from the rear surface of the bracket **67**. When the leg **85** of the spring clip **83** is engaged with the lug **87**, the lid is held in closed position.

Opening of the lid from its closed position is facilitated by the incorporation in the bracket **67** of a slot **89** which is proportioned to admit the extension **79** of the key **25** and which is located in adjacent underlying relation to the leg **85** of the spring clip **83** at an angle of about 45° with respect to the vertical. When the key **25** is inserted within the cylinder **59** and rotated into alignment with the slot **89**, the key can be further inserted for passage through the slot **89** so as to disengage the spring clip **83** from the lug **87**, thereby permitting upward hinging of the lid **13**.

When the key is rotated beyond 45° and through an angle of about 90° the lock assembly **23** causes the trigger **73** to release the gun barrel for movement outwardly of the chest and for accompanying cap firing action. The trigger **73** is pivotally mounted on a boss **91** on the lower surface of the sub-frame **43**. The trigger includes a cam-engaging arm **93** and a hammer-engaging arm **95** which extends through an opening **97** in the sub-frame **43**. The outer end of the hammer-engaging arm **95** includes a right angle tip **99** which is seated when the gun barrel is cocked, as shown in FIGURE 2, in a mating notch **101** on the lower surface of the hammer **17**. When thus located, the gun barrel will be retained in cocked condition. This feature results from the tendency of the biasing spring to rotate the trigger **73** in the counterclockwise direction, as seen in FIGURE 2, which rotation is prevented by the engagement of the gun barrel cylindrical rod **47** against the upper surface of the aperture in the decorative plate **41** and the engagement of the gun barrel shaft **49** in the opening **53** in the cross bar **45** of the sub-frame **43**.

However, if the trigger **73** is rotated in a clockwise direction by action of the cam **71**, the hammer-engaging arm **95** is disengaged from the hammer **17** to release the gun barrel for forward movement outwardly of the chest and for cap firing action.

As seen particularly in FIGURES 3 and 4, the cam **71** is located on the head portion **63** of the cylinder **59** at an angle of about 90° with respect to the keyhole **75**. When the cylinder is rotated by means of the key through an angle of about 90° from the vertical, the cam **71** elevates the arm **93** of the trigger to disengage the gun barrel **15** and fire a cap. This activity normally results when a person attempting to open the lock is not aware that the key should be additionally inserted after an initial 45° of rotation to unlock the lid, as explained previously. Thus, an uninitiated player attempting to open the lock will instead release the gun barrel **15** for cap firing action. However, because the trigger **73** tends to retain the gun barrel **15** in cocked condition, the cap firing activity will not occur when the lid **13** is properly opened by further axially inserting the key **25** after an initial 45° of rotation.

As disclosed, the toy chest includes a concealed gun triggerable by a lock assembly **23** which is selectively operable to either open the chest or fire the gun. Only an initiated player will know that the key should be inserted further within the lock after having been rotated 45° in order to open the lid. Other players will continue to turn the cylinder until the cap firing activity occurs. Thus, the toy provides a fascinating device which, cannot be opened by an uninitiated player and which permits the owner to store his valuables and surprise unsuspecting friends who attempt to open the chest.

Various features of the invention are set forth in the following claims.

What is claimed is:

1. A toy comprising a walled container with an opening in one wall thereof and a hinged top wall, a barrel carried in said container for movement through said opening, an anvil in said container for mounting a cap thereon, a hammer on said barrel, means in said container biasing said barrel for movement outwardly of said container through said opening and for action of said hammer against said anvil, and means in said container for releasably holding said top wall in closed position and for releasably holding said barrel within said container and said hammer in spaced relation to said anvil, said holding means including a member selectively movable to one position to release said top wall for opening movement and to another position to release said barrel for outward movement and for cap firing action of said hammer.

2. A toy comprising a walled container, an opening in one wall and a hinged top wall, sound producing means in said container, a barrel carried in said container for movement outwardly through said opening, means for biasing said barrel for movement outwardly of said container and for cocking said sound producing means, and locking means for releasably holding said top wall in closed position and for releasably holding said barrel in said container and said sound producing means in cocked condition, said locking means including a key selectively movable to one position to release said top wall and to another position to release said biasing and cocking means so as to cause movement of said barrel outwardly of said container and the production of a sound.

3. A toy comprising a walled container with an opening in one wall thereof and a hinged top wall, latch means for releasably holding said top wall in closed position, a barrel carried in said container for movement through said opening, an anvil for mounting a cap thereon, a hammer on said barrel, means biasing said barrel for movement outwardly of said container through said opening and for action of said hammer against said anvil, and locking means for releasably engaging said latch means to hold said top wall in closed position and for releasably holding said barrel within said container and said hammer in spaced relation to said anvil, said locking means including an axially and rotatably movable key which is selectively rotatable through a predetermined angle to one position wherein said key can be axially moved inwardly of said container to disengage said latch

means so as to permit opening of said top wall and past said predetermined angle to another position to release said barrel for movement outwardly of said container and for cap firing action of said hammer.

4. A toy comprising a walled container with an opening in one wall thereof and a hinged top wall, a barrel carried in said container for movement through opening, means mounted within said container for producing a sound incident to movement of said barrel, means in said container biasing said barrel for movement outwardly of said container through said opening, and means in said container for releasably holding said top wall in closed position and for releasably holding said barrel within said container, said holding means including a member selectively movable to one position to release said top wall for opening movement and to another position to release said barrel for outward movement and for actuation of said sound producing means.

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