Jan. 30, 1962 W. H. RIECHERS 3,018,576

LOCKING SAFETY DEVICE FOR FIREARMS

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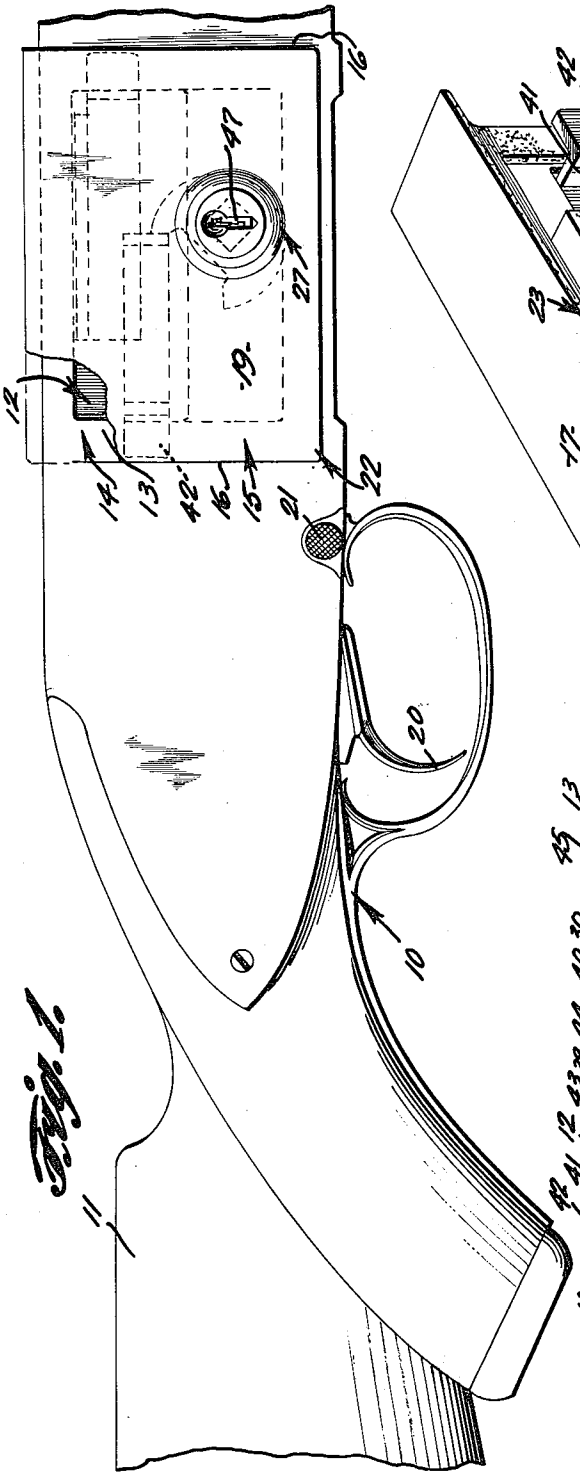


Fig. 1.

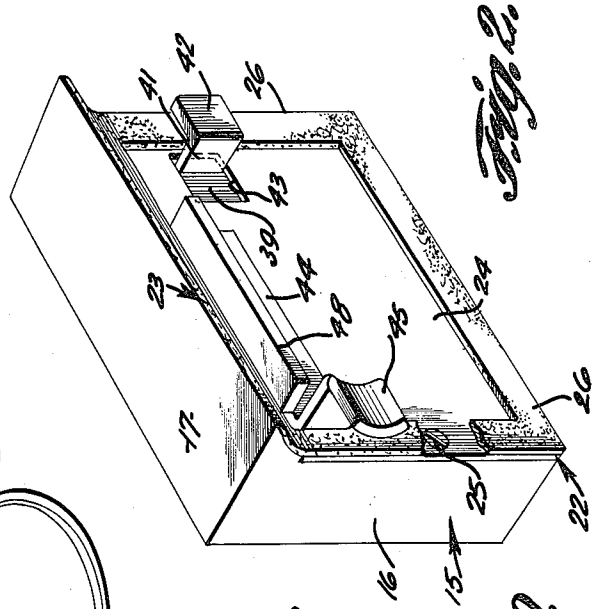


Fig. 2.

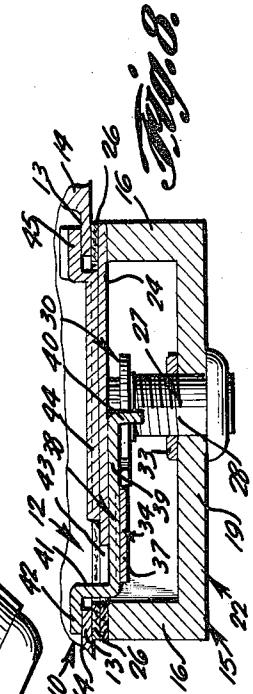


Fig. 3.

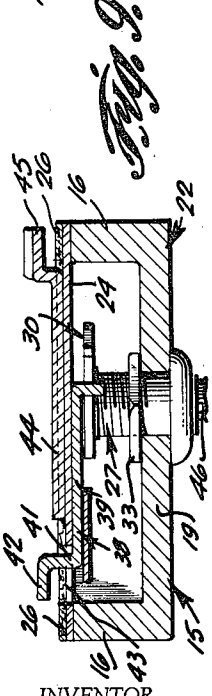


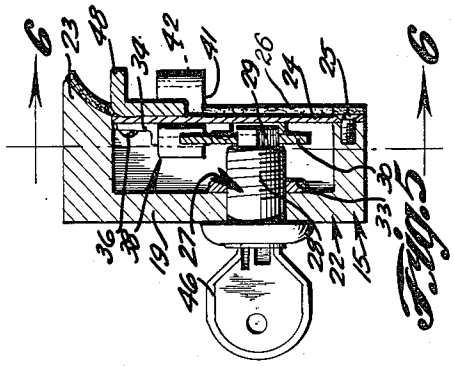
Fig. 4.

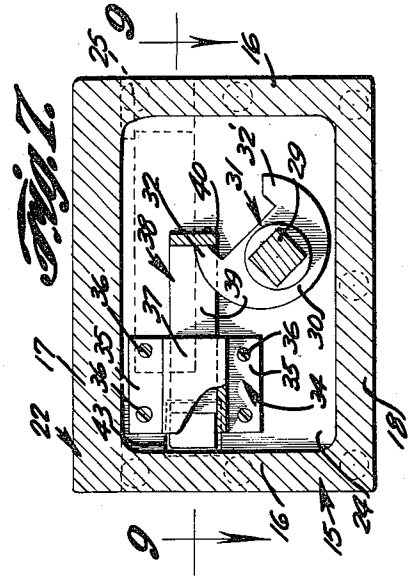
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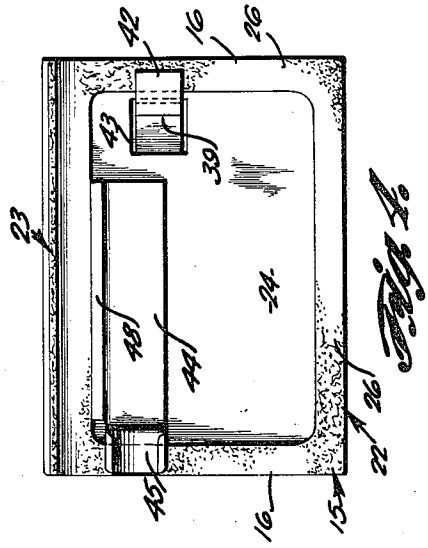
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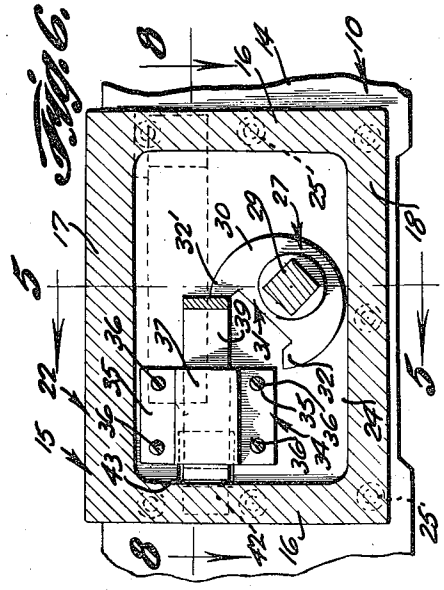
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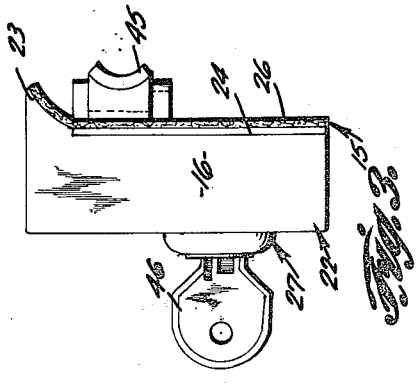
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LOCKING SAFETY DEVICE FOR FIREARMS

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4 Claims. (Cl. 42—1)

The present invention relates to a firearm such as a shot gun, a rifle, or other similar firearms, and more particularly to a safety device for such a firearm.

The primary object of the invention is to provide a locking safety device for a firearm such as a rifle or the like, wherein when the locking safety device of the present invention is in place locked on the firearm, it will be impossible to load shells or cartridges into the firearm so that the firearm cannot be accidentally fired.

A further object is to provide a locking safety device for firearms of the type stated which can be readily locked in place when a firearm is to be rendered inoperative, and wherein the device can be readily removed when the firearm is to be used, the present invention providing a means for preventing unauthorized persons, children or the like from discharging the firearm accidentally or intentionally, and wherein the device of the present invention further includes a sealing member which helps prevent dust or other foreign matter from entering the interior of the firearm when the firearm is not being used.

Still another object is to provide such a locking safety device for firearms that is economical to manufacture and efficient in operation and which is rugged in structure and foolproof in use.

These and other objects of the invention will become apparent from a reading of the following specification and claims, together with the accompanying drawings, wherein like parts are referred to and indicated by like reference characters, and wherein:

FIGURE 1 is a fragmentary side elevational view of a firearm such as a rifle and showing the locking safety device of the present invention thereon, and with parts broken away.

FIGURE 2 is a perspective view of the firearm locking safety device per se of the present invention.

FIGURE 3 is an end elevation view of the locking safety device per se.

FIGURE 4 is a view taken at right angle to the view shown in FIGURE 3.

FIGURE 5 is a sectional view taken on the line 5—5 of FIGURE 6.

FIGURE 6 is a sectional view taken on the line 6—6 of FIGURE 5, and showing the device in locked position.

FIGURE 7 is a view similar to FIGURE 6 but showing the device in unlocked position.

FIGURE 8 is a sectional view taken on the line 8—8 of FIGURE 6 and showing the device in locked position.

FIGURE 9 is a sectional view taken on the line 9—9 of FIGURE 7 and showing the device in unlocked position.

Referring in detail to the drawings, the numeral **10** indicates a portion of a conventional firearm such as a rifle, gun or the like, and the firearm **10** includes the usual stock **11** as well as an opening which defines a receiver **12**, and the firearm **10** is of the type wherein the cartridges that are to be discharged or fired are loaded into the receiver **12** on a clip or the like so that the projectiles will travel through the barrel of the firearm in the usual manner when the trigger **20** is manually moved, and as shown in FIGURE 1 the numeral **21** indicates a safety device which can be set in order to prevent firing of the firearm **10**.

According to the present invention there is provided a

locking safety device which is indicated generally by the numeral **15**, and the locking safety device **15** embodies or comprises a hollow housing that is indicated generally by the numeral **22**. As shown in the drawings the housing **22** includes spaced parallel vertically disposed end walls **16** as well as horizontally disposed spaced parallel top and bottom walls **17** and **18**, and the housing **22** further includes a vertically disposed side wall **19**. There is provided on the upper portion of the housing **22** a flanged portion **23** which is adapted to extend slightly over the top of the firearm so as to help maintain the housing in its proper position in blocking or closing relation with respect to the receiver **12**.

The numeral **24** indicates a vertically disposed plate which is secured to the bottom and end walls of the housing as for example by means of securing elements or screws **25**, and a rectangular sealing strip **26** which may be made of felt or other suitable yieldable material is adapted to be secured in place as for example by means of a suitable adhesive. The sealing strip **26** helps prevent dust, foreign matter or the like from entering the receiver **12** so that the device of the present invention will not only function as a safety device but will also help insure that the interior working parts of the firearm can be kept in a better condition.

Extending through the side wall **19** is a cylinder lock **27** which may be held in place by means of a nut or fastener **33**, and the cylinder lock **27** includes a stationary outer casing **28** as well as a rotary core or pin **29**, FIGURE 6, and the numeral **30** indicates a movable cam which is suitably affixed to the rotary core or pin **29**. The cam **30** is shaped to include a recessed portion or cutout portion **31** that defines spaced apart fingers **32** and **32'** for a purpose to be later described.

As shown in FIGURES 6 and 7 for example, a guide element **34** is arranged contiguous to the inner surface of the plate **24**, and the guide element **34** is shaped to include flat upper and lower end portions **35** that are secured to the inner surface of the plate **24** as for example by means of securing elements such as screws **36**. The guide element **34** further includes an intermediate offset portion **37**, and the numeral **38** indicates a slide member which includes a main straight section **39** that is slidable in the offset portion **37** of the guide element **34**. The slide member **38** further includes a transverse lip **40** on the inner end thereof, and the lip **40** is adapted to be selectively engaged by the fingers **32** and **32'** of the cam **30** as for example as shown in FIGURES 6 and 7. The slide member **38** is further shaped to include a transverse end portion **41** which projects through an opening or slot **43** in the plate **24**, and the transverse end portion **41** terminates in a lug **42** that is adapted to engage behind a portion of the shoulder **13** of the firearm **10** when the device is in locked position as for example as shown in FIGURE 8.

The numeral **44** indicates a strip or bar that is secured to the outer surface of the plate **24** in any suitable manner, as for example by welding, and the bar **44** is shaped to include an offset end portion **45** which is adapted to engage a portion of the shoulder **13** that is opposite the portion of the shoulder **13** engaged by the lug **42**, and as shown in FIGURE 3 for example, the offset end portion **45** defines a tab, and the tab or offset end portion **45** is arcuate or curved in shape so as to facilitate the initial placement of the device on the firearm or to facilitate the removal of the device from the firearm.

The numeral **46** indicates a key which is adapted to be inserted in the usual slot **47** of the lock **27** in order to actuate the lock.

As shown in the drawings there is provided a horizontally disposed flange **48** on the bar **44**, and the flange

48 is adapted to project into the receiver 12 below the upper portion of the shoulder 13 so as to help maintain the housing 22 in its proper position whereby the flange 48 will prevent the housing from moving up too far on the firearm 10.

From the foregoing, it is apparent that there has been provided a locking safety device for firearms, and with the parts arranged as shown in the drawings, it will be seen that when the firearm is to be locked, the device 15 is positioned contiguous to the opening for the receiver 12 in the firearm 10. While the receiver 12 has been shown having an opening off to one side of the firearm 10, it is to be understood that the present invention is not restricted or limited to any particular type of firearm and the safety device of the present invention can be used with firearms of different types and having the opening for the receiver in different locations.

When the firearm is to be locked to prevent unauthorized use thereof, the device 15 is arranged contiguous to the receiver 12, and the tab 45 is engaged behind a portion of the shoulder 13 of the firearm, and during this initial placement of the device on the firearm, the slide member 38 is in the position such as that shown in FIGURE 9. Then, with the housing 22 contiguous to the firearm, a key such as the key 46 can be inserted in the key slot 47 and by manually turning the key, the pin or core 29 will be rotated so as to move the cam 30 whereby the finger 32' will move from a position such as that shown in FIGURE 7 to a position such as that shown in FIGURE 6 whereby the finger 32' will engage the lip 40 of the slide member 38 so as to slide or move the slide member 38 as for example from the position of FIGURE 7 to the position of FIGURE 6. As the slide member 38 moves, the lug 42 of the slide member will engage behind the shoulder 13 in opposition to the tab 45 whereby the housing will remain locked to the firearm. The key 46 can then be removed and the housing will remain firmly locked to the firearm. Thus, with the parts in locked position as for example as shown in FIGURES 6 and 8, the firearm or rifle 10 cannot be used and also the receiver 12 will be blocked off or closed off so that no further shells or cartridges can be inserted therein.

When the firearm is to be used, the device 15 of the present invention can be readily disconnected or removed from the firearm and this is accomplished by inserting the key 46 in the slot 47 and actuating the lock 27 so as to rotate the pin 29 in order to cause the cam 30 to move from a position such as that shown in FIGURES 6 and 8 to a position such as that shown in FIGURES 7 and 9 and as the cam 30 moves, its finger 32 will move into engagement with the lip 40 to move the slide member 38 whereby the lug 42 will move inwardly out of engagement with the shoulder 13 so that the device can be readily disengaged or disconnected from the firearm. The opening 43 provides sufficient clearance to permit the portion 41 of the slide member 38 to move therein as for example when the device is being locked or unlocked.

The guide element 34 includes the offset portion 37 through which slides the portion 39 of the slide member 38 so that the element 34 insures that the member 38 will be maintained in its proper aligned position as it moves back and forth. The lock 27 is adapted to be fixedly mounted in the wall 19 as for example by means of the nut or fastener 33.

With the device in position on the firearm, the sealing strip 26 will help insure that there will be a tight seal between the housing and the firearm so that the possibility of dust, dirt, or other foreign matter entering the interior of the firearm will be minimized.

The parts can be made of any suitable material and in different shapes or sizes.

The present invention can be used on different types of firearms such as shot guns, rifles in various gauges or calibers, and with the present invention firearms of various types can be locked and rendered inoperative when the device is in locked position. By constructing the device in a suitable size or shape, it can be adapted to repeating shot guns and rifles, and the device will permit unauthorized persons, children or the like from discharging the firearm accidentally or intentially and the device will help eliminate accidental shooting due to improper handling of supposedly empty guns by rendering inoperative any firearm when the device is locked thereon. The parts of the device can be made of a suitable material such as metal, and the seal 26 may be made of felt, plastic, or the like. The housing 22 forms the main body of the device and provides for attachment of the other parts thereof, and the cover plate 24 retains certain of the parts in their proper position. The movable bolt or slide member 38 causes the device to be locked or unlocked due to the direction of force transferred to it from the cam 30 by moving the key 46, and the member 34 helps to maintain the slide 38 in its proper aligned position. A tab is adapted to be used and arranged in a fixed position and such a tab is adapted to project into the chamber of the firearm so as to hold the front end of the apparatus while in locked position. The dust seal 26 is adapted to be cemented or adhesively fastened to the complete assembly to prevent marring and to seal out dust from the firearm. The key provides a means for transmitting an exerted force from the operator's hand to lock and unlock the apparatus.

When locking the device in position, care should be exercised to insure that all ammunition is removed from the gun and the receiver 12 is empty. The front end of the device is oriented so as to point towards the muzzle of the firearm, and with the parts in unlocked position, the tab 45 is inserted into the receiver of the firearm and at the same time the lug 42 is entered into the receiver, and slight pressure is applied to the top of the device to compress the non-marring dust seal 26 and to give the slide member sufficient clearance to slide into locked position. With pressure applied, the key 46 is turned approximately a quarter turn and then the key is removed from the lock 27 and the device is now in locked position and the firearm is ready to be stored or safely displayed.

To unlock and remove the apparatus, the key 46 is inserted in the lock 27 and slight pressure is applied to the top of the housing so as to compress the non-marring dust seal 26 and provide clearance for the slide member to slide to unlocked position. With pressure applied, the key 46 is turned to unlocked position, and the apparatus is grasped, and with a lifting and pulling motion it can be readily removed from the firearm and the firearm is now ready to be used in the usual manner.

The member 48 functions as a guide.

It will be noted that the movement of the bolt of the firearm will be restricted to the extent that the tabs 42 and 45 are both entered in the receiver when the device is in locked position. Thus, these tabs will prevent the bolt from closing to the firing position.

In addition, it is intended that whenever a firearm of this type is adapted to, it would be impossible to close the bolt to firing position. Therefore the firing pin would not be energized and could not possibly fire a cartridge. The bolt will be approximately the length of the cartridge (for the particular gun) from the closed position when the device is in locked position.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

What is claimed is:

1. The combination with a firearm comprising a stock, having a receiver with an opening therein providing a shoulder of reduced size contiguous to said receiver, and a locking safety device embodying a hollow housing including horizontally disposed spaced apart top and bottom walls, spaced parallel vertically disposed end walls

and a vertically disposed side wall, a vertically disposed plate positioned in spaced parallel relation with respect to said side wall, said plate being secured to said bottom and end walls, a key operated lock projecting through said side wall and said lock including a stationary casing and a rotary pin, a movable cam affixed to said pin and said cam including a recessed portion defining a pair of spaced apart fingers, a guide element including end portions affixed to the inner surface of said plate, and said guide element further including an intermediate offset portion, a slide member including a main straight section slidably mounted in the offset portion of said guide element, a transverse lip on the inner end of said slide member for engagement by said fingers, a transverse end portion on said slide member terminating in a lug positioned to engage behind the shoulder of the firearm, a bar secured to the outer surface of said plate and said bar including an offset end portion defining a tab, and said tab positioned to engage a portion of the shoulder opposite to said lug whereby said housing is retained in position to close the opening in said receiver to prevent the loading of said firearm.

2. The structure as defined in claim 1 and further including a sealing strip affixed to said housing.

3. The structure as defined in claim 1 and further including a horizontally disposed flange on the upper portion of said bar.

4. In a firearm locking safety device, a hollow housing including horizontally disposed spaced apart top and bottom walls, spaced parallel vertically disposed end walls

and a vertically disposed side wall, a flanged portion on the upper end of the housing, a vertically disposed plate positioned in spaced parallel relation with respect to said side wall, said plate being secured to said bottom and end walls, a sealing strip affixed to said housing, a key operated lock projecting through said side wall and said lock including a stationary casing and a rotary pin, a movable cam affixed to said pin and said cam including a recessed portion defining a pair of spaced apart fingers, a guide element including end portions affixed to the inner surface of said plate, said guide element further including an intermediate offset portion, a slide member including a main straight section slidably mounted in the offset portion of said guide element, a transverse lip on the inner end of said slide member for engagement by said fingers, a transverse end portion on said slide member terminating in a lug, a bar affixed to the outer surface of said plate and said bar including an offset end portion defining a tab, a horizontal disposed flange extending along the upper edge portion of said bar and said housing being positioned over the opening in the receiver of the firearm and retained in fixed relation to the opening to prevent loading of said firearm.

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