J. KAUTZKY.

AUTOMATIC SINGLE TRIGGER MECHANISM FOR DOUBLE BARREL GUNS.

APPLICATION FILED APR. 14, 1914.

1,109,632. Patented Sept. 1, 1914.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

INVENTOR

BY

ATTORNEYS
UNITED STATES PATENT OFFICE.

JOSEPH KAUTZKY, OF FORT DODGE, IOWA.

AUTOMATIC SINGLE-TRIGGER MECHANISM FOR DOUBLE-BARREL GUNS.


Application filed April 14, 1914. Serial No. 831,886.

To all whom it may concern:

Be it known that I, JOSEPH KAUTZKY, a citizen of the United States, residing at Fort Dodge, county of Webster, State of Iowa, have invented a new and useful Automatic Single-Trigger Mechanism for Double-Barrel Guns, of which the following is a specification.

My invention consists of novel means for preventing the immediate discharge of the second barrel after the discharge of the first barrel.

It further consists of novel means for actuating the trigger by the movement of the safety block, in order to insure the engagement of a portion of the trigger with said block.

It further consists of means for returning the block to unlocking position by movement of the trigger.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same will give in practice satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized, and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a side elevation of the frame of a breech loading double-barrel gun, in detached position, and showing my invention carried thereby. Fig. 2 represents a sectional view on line a—a Fig. 1. Fig. 3 represents a longitudinal vertical section of portions of the device, on line y—y Fig. 2, in cocked position. Fig. 4 represents a longitudinal vertical section, showing portions of the device on line z—z Fig. 2, in fired position. Fig. 5 represents a vertical sectional view of certain of the parts seen in Fig. 1, showing the same in fired position, showing the block 22 wedged between the abutment 20 and the shoulder 21. Fig. 6 represents a vertical sectional view on line a—a, Fig. 1. Fig. 7 represents, in detached position, an elevation of the selective lever, and parts operable therewith. Fig. 8 represents a side elevation of portions of the device seen in Fig. 7, in a different position.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings: 1 designates a frame for a gun lock, comprising the tang 2 and the trigger plate 3, said frame being provided with means adapted for supporting two barrels (not shown) at its front end portion.

4 designates hammers, which are pivotally mounted in the frame 1 in a suitable manner, and which are acted upon in any suitable or desired manner for moving the same to fired position, when released, each of said hammers having a sear notch 5 at a suitable point thereon.

6 and 7 designate the sears pivotally mounted with respect to the frame and said hammers, each being provided with a sear nose 8 adapted for engagement with the sear notch 5 of a hammer. Suitable springs 9 act upon said sears, tending to depress the same. Adjacent the end of each sear, opposite to that of the nose 8, is a lug or arm 10 and 11 respectively, each lug being provided with a flat, inclined, lower face 12.

13 designates a tumbler pivotally mounted, in the present instance, on the trigger-plate, at a suitable point with respect to the lug ends of the sears, the upper face of said tumbler being provided with the oppositely inclined faces 14 and 15, adapted and properly located for engagement with the faces 12 of the lugs 10 and 11, and a roller 16 is journaled to the free lower end of the said tumbler 13.

17 designates a trigger pivotally mounted in any suitable or desired manner in the frame 1, and which, as here shown, is provided with a cam 18, which is adapted to engage with and be engaged by the said roller 16, by means of which contact, the tumbler 13 is turned into engagement with the lugs 10 or 11, respectively, of the sears, when the trigger is pulled, as will be hereinafter described. The trigger 17 carries an upwardly projecting member 19, here shown as integral therewith, and on said member I provide an abutment or lug 20, which projects laterally sufficiently from the member 19 for the purpose hereinafter described.

21 designates a projection or shoulder carried by the said trigger.

22 designates the safety block, which is pivotally mounted in any suitable manner in operative relation to said trigger, at a point slightly to the rear and laterally of
said member 19, said block having a portion thereof suitably located and adapted for engagement with the projection or shoulder 21 of the trigger, this portion being shown, as a laterally extending lug 23, having a face adapted to engage said shoulder 21 at the proper time.

24 designates a spring adapted to bear suitably upon a portion of said block, in order to provide a yielding bearing thereon, so that while permitting movement of said block, the said spring serves to hold said block in either locking or unlocking position after said block has been actuated.

The inoperative or unlocking position of said block 22 is seen in Figs. 2 and 3, out of the path of, and out of engagement with, the abutment 20 of the member 19. In the present instance, I have shown the spring formed with two bearing members engaging the curved upper faces 25 and 26 on said block, but any suitable means may be employed for accomplishing the desired action. I preferably form the upper face of the block curved, as at 27, for ease of operation of the parts.

In order to provide for which barrel,—that is, the right or left—shall be discharged first, I have mounted a selector attachment, consisting of a slide 28 movable mounted in the frame 1 and provided with a spring 29, extending rearwardly therefrom, and which is provided with an end 30 which is preferably V-shaped, as at 30, and adapted for engagement with the underside of the tumbler 13, said slide 28 being adapted to be positioned by the operator, in order that the said end 30 of the spring 29 will engage the said tumbler 13 on one side or the other of the pivotal point 31 thereof. As seen in Fig. 7, the said end 30 is in engagement on the underside of the tumbler 13, in front of the pivot point 31, in order that the upper face 14 of said tumbler 13 in position to engage with the lug 10 of the rear 6. When the slide 28 is moved to its opposite position, that is, in the direction indicated by the arrow in Fig. 7, the end 30 of the spring 29 is moved to the other side of the pivotal point 31 of the tumbler 13, causing it to assume the position seen in Fig. 8, with its other face 15 in position to engage with the lug 11 of the other rear 7. At the same time, by this movement, the roller 16, carried by the tumbler 13, will be properly positioned with respect to the cam 18 of the trigger 17, in order to properly actuate the tumbler 13 to actuate the lug in engagement therewith.

The operation of the device will be readily understood. By opening the gun for loading, and returning the barrels to their proper position, the hammers 4 will be properly cocked; that is, they will be in the position seen in Fig. 1, with the sear noses 8 in engagement with the respective notches 5 of the hammers 4. The slide 28 may now be moved to position the tumbler 13, depending upon which barrel it is desired to fire first. Considering that the same is in the position seen in Fig. 1, the parts will be in position to fire the right-hand barrel first, with the roller 16 on the left-hand side of the cam 18 of the trigger 17. By a rearward pull upon the trigger 17, it will be understood that the roller will be elevated, rotating the tumbler, upon its pivotal point 31, and elevating the lug 10 in engagement therewith, thus raising the end of the rear 6, releasing the hammer from engagement with the rear, and firing the right hand barrel. As the trigger moves rearwardly and the gun is fired, the force of the recoil will overcome the bearing of the spring 24 on the block 23, and will rotate the block 22 upon its pivotal point, and position the upper surface 27 thereof beneath the abutment 20 on the member 19 of the trigger 17, and when pressure on the trigger is suddenly released by the recoil, the abutment 20 engages the said upper face of the block 22, see Fig. 5, said block being wedged between the abutment 20 and the shoulder 21. This engagement is only temporary, as the rebound of the gun from the shoulder of the operator will cause the trigger to engage his finger and be slightly raised, which will elevate the abutment 20, and the block 22 will be released from engagement therewith, and the shoulder 21 on the trigger in engagement with the lug 10 will overcome the holding action of the spring 24 and will rotate said block 22 on its pivotal point and it will return to normal or unlocking position ready for the next firing. In order to fire the second barrel, therefore, it is necessary for the operator to release the trigger, allowing the same to move downwardly, and the end of the right rear 6, which has been previously raised, is lowered by the action of the spring 9, with suitable force, to cause the lug 10 to strike the face 14 of the tumbler 13 and rotate the same on its pivotal point, thus moving it from its position in Fig. 1, to that seen in Fig. 3, causing the roller 16 to be moved to the opposite side of the cam 18, with its face 15 in engagement with the other lug 11 of the other rear 7, so that by a second rearward pull of the trigger, the left barrel will be discharged in the same manner as the first.

It will thus be seen from the above, that I have provided a safety device, which is mounted upon the frame independently of the trigger and normally out of engagement therewith, but which is adapted to be actuated by the recoil to be moved in the path of, and to engage with, a suitable portion of the trigger to prevent the involuntary or premature firing of the second barrel, after
the first barrel has been discharged, and this
action is assisted by the movement of the
block, while the trigger, when moved by the
rebound, rotates the block to unlocking posi-
tion.

It will now be apparent that I have de-
vised a novel and useful construction of an
automatic single-trigger mechanism for dou-
ble-barrel guns, which embodies the features
of advantage enumerated as desirable in the
statement of the invention and the above
description, and while I have in the present
instance, shown and described a preferred
embodiment thereof which will give in prac-
tice satisfactory and reliable results, it is to
be understood that the same is susceptible of
modification in various particulars without
departing from the spirit or scope of the in-
vention or sacrificing any of its advantages.

Having thus described my invention, what
I claim as new and desire to secure by Let-
ters Patent is:

1. In a device of the character stated, a
plurality of firing means, a trigger provided
with means for successively actuating said
firing means, a laterally extending shoulder
carried by a member of said trigger, and a
block mounted in operative relation to said
member and laterally thereof and normally
out of engagement with said shoulder, and
arranged to be moved by the recoil to a po-
sition with its face beneath said shoulder to
be temporarily engaged thereby in this one
position of said block to prevent said trig-
ger from being released involuntarily by the
recoil.

2. In a device of the character stated, a
plurality of firing means, a trigger provided
with means for successively actuating said
firing means, a laterally extending shoulder
carried by a member of said trigger, and a
block, having a curved face, mounted in op-
ervative relation to said member and laterally
thereof and normally out of engagement
with said shoulder, and arranged to be
moved by the recoil to a position with its
upper face beneath said shoulder to be tem-
porarily engaged thereby in this one posi-
tion of said block to prevent said trigger
from being released involuntarily by the
recoil.

3. In a device of the character stated, a
plurality of firing means, a trigger provided
with means for successively actuating said
firing means, a laterally extending shoulder
carried by said trigger, a block mounted in
operative relation to said shoulder, and
adapted to be moved to a position with its
upper face beneath said shoulder to be en-
gaged thereby to prevent said trigger from
being released involuntarily by the recoil,
and means on said trigger for moving said
block to unlocking position.

4. In a device of the character stated, a
plurality of firing means, a trigger pro-
vided with means for successively actuat-
ing said firing means, a laterally extending
shoulder carried by said trigger, a block
mounted in operative relation to said shoul-
der, and adapted to be moved to a position
with its upper face beneath said shoulder
to be engaged thereby to prevent said trig-
ger from being released involuntarily by the
recoil, means on said trigger for moving said
block to unlocking position, and yielding
means for holding the block in either lock-
ing or unlocking position.

5. In a fire arm, the combination with a
plurality of firing means, of a trigger pro-
vided with means for successively actuating
the firing means and having a locking abut-
ment, a detent mounted in operative rela-
tion to said abutment and adapted to be
moved to engage therewith upon the dis-
charge of said gun, and means on said de-
tent adapted to engage said trigger during
the movement of said detent to actuate said
abutment to engage said detent.

6. In a fire arm, the combination with a
plurality of firing means, of a trigger pro-
vided with means for successively actuating
the firing means and having a locking abut-
ment, a detent mounted in operative rela-
tion to said abutment and adapted to be
moved to engage therewith upon the dis-
charge of said gun, means on said detent
adapted to engage said trigger during the
movement of said detent to actuate said
abutment to engage said detent, and means
carried by said trigger for positively moving
said detent out of engagement with said
abutment.

7. In a fire arm, the combination with a
plurality of firing means, a trigger provided
with means for successively actuating the
firing means and having a locking abutment,
a detent mounted in operative relation to
said abutment and adapted to be moved to
engage therewith upon the discharge of said
gun, means on said detent adapted to en-
gage said trigger during the movement of
said detent to actuate said abutment to en-
gage said detent, means carried by said trig-
ger for positively moving said detent out of
engagement with said abutment, and
yielding means engaging said detent for
holding the same in either operative or in-
operative positions.

8. In a fire arm, the combination with a
plurality of firing means, of a trigger pro-
vided with means for successively actuat-
ing the firing means and having a locking abut-
ment, a detent mounted in operative rela-
tion to said abutment and adapted to be
moved to engage therewith upon the dis-
charge of said gun, and a lug on said de-
tent adapted to be engaged by said trigger
for moving said detent out of engagement
with said abutment.

9. In a fire arm, the combination with a
plurality of firing means, of a trigger provided with means for successively actuating the firing means and having a locking abutment, a detent mounted in operative relation to said abutment and adapted to be moved to engage therewith upon the discharge of said gun, and means on said detent adapted to be engaged by said trigger for moving said detent out of engagement with said abutment.

10. In a fire arm, the combination with a plurality of firing means, of a trigger provided with means for successively actuating the firing means and having a locking abutment, a detent mounted in operative relation to said abutment and adapted to be moved to engage therewith upon the discharge of said gun, and means common to said trigger and said detent for moving the latter out of engagement with said abutment.

JOSEPH KAUTZKY.

Witnesses:
C. D. McVay,
K. M. Baohy.