

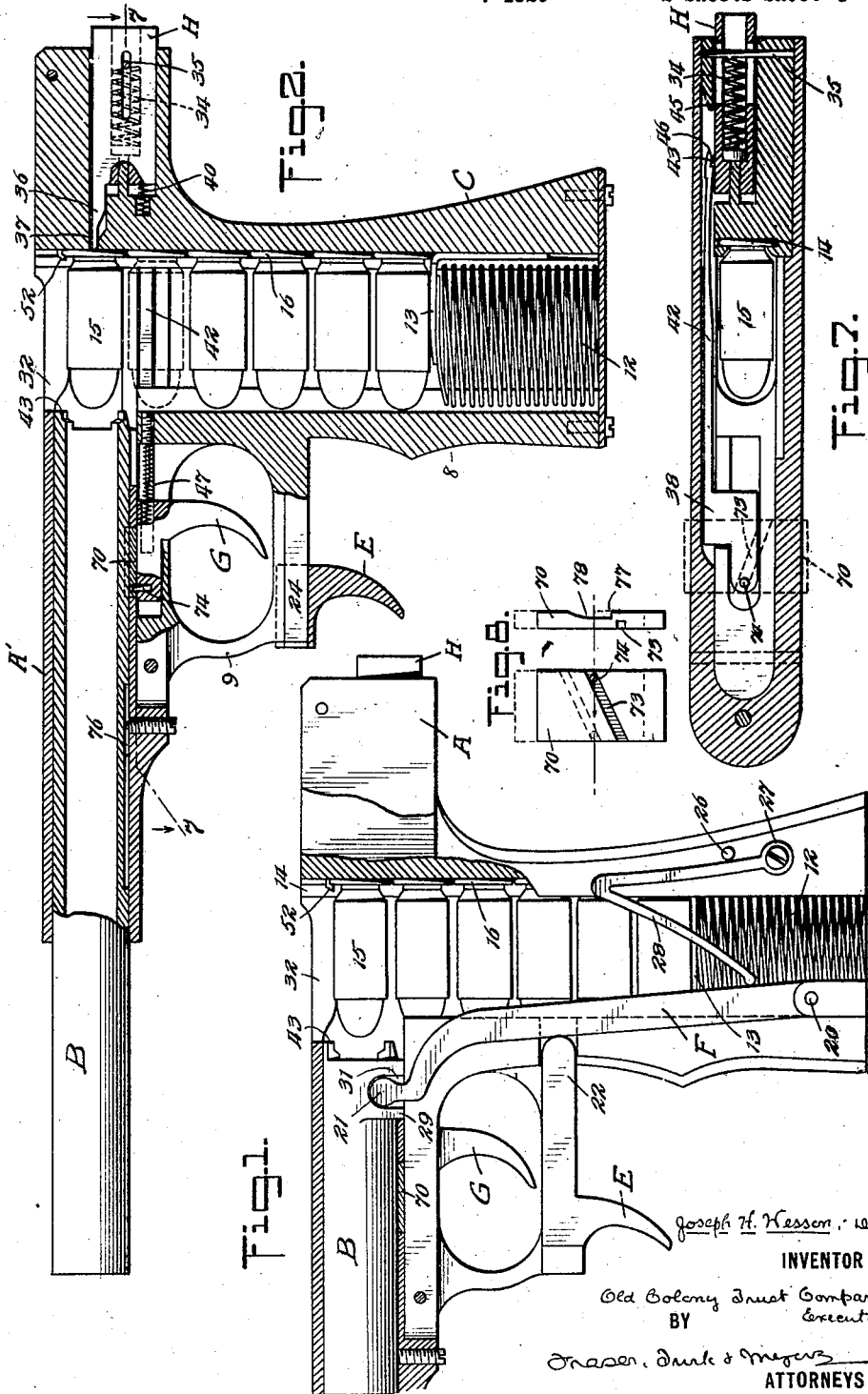
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J. H. WESSON
MAGAZINE PISTOL

Filed Dec. 7, 1920

2 Sheets-Sheet 1



Joseph H. Wesson, Inc.
INVENTOR
Old Colony Trust Company
BY
Dreser, Dink & Meyers
ATTORNEYS

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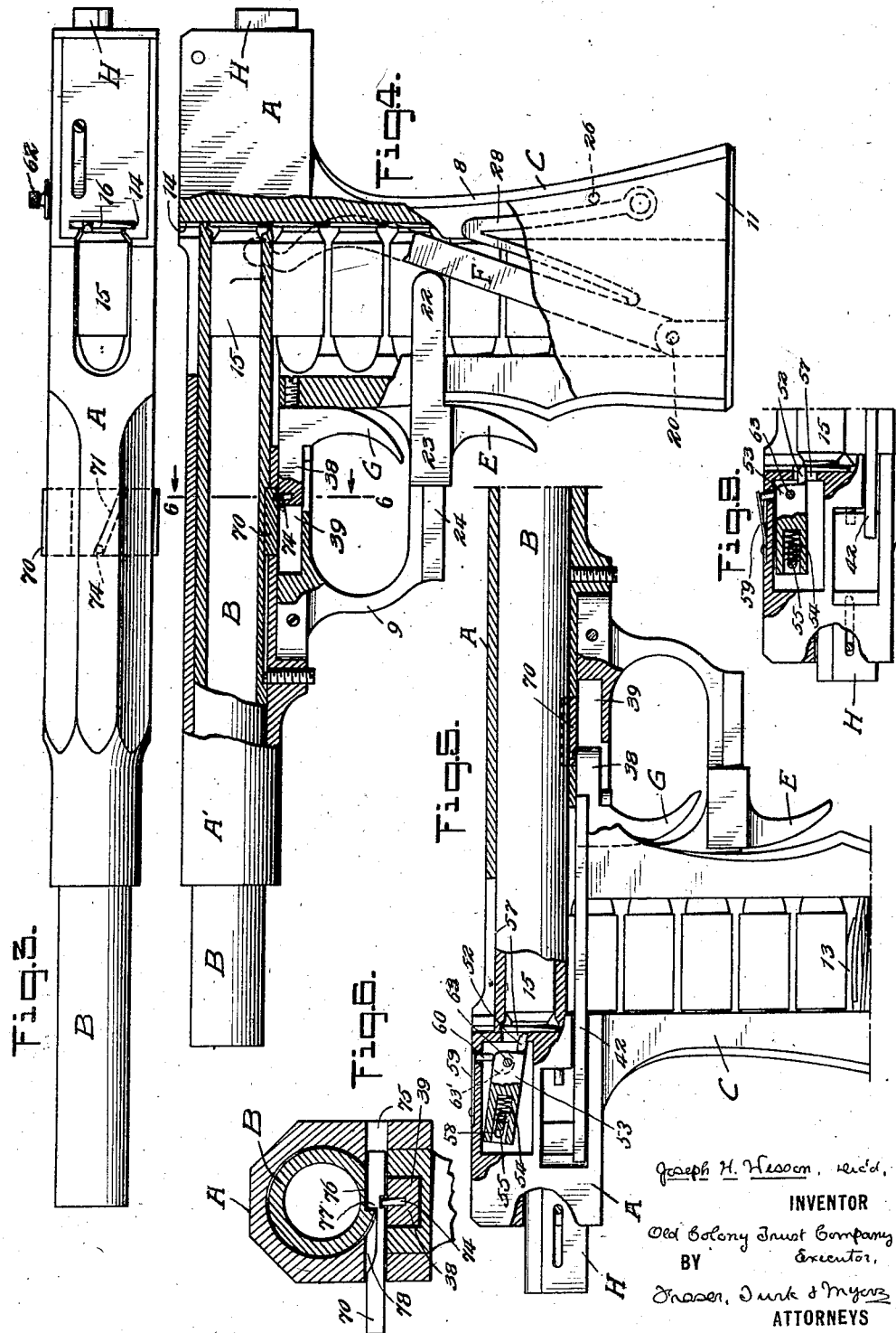
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UNITED STATES PATENT OFFICE.

JOSEPH H. WESSON, DECEASED, LATE OF SPRINGFIELD, MASSACHUSETTS; BY OLD COLONY TRUST COMPANY, EXECUTOR, OF BOSTON, MASSACHUSETTS.

MAGAZINE PISTOL.

Application filed December 7, 1920. Serial No. 428,943.

To all whom it may concern:

Be it known that JOSEPH H. WESSON, deceased, late a citizen of the United States of America, residing in Springfield, in the county of Hampden and State of Massachusetts, did invent certain new and useful Improvements in Magazine Pistols, of which the following is a specification.

This invention relates to magazine fire-arms and particularly to pistols of the type having a slidable barrel which moves rearwardly to receive within it a cartridge from the magazine.

Heretofore, pistols of this type have usually been provided either with stationary firing pins against which the cartridge was thrust by the action of the slidable barrel, or with firing pins which were directly actuated by the barrel retracting mechanism. By the present invention the barrel retracting mechanism and the firing mechanism are independent of each other, thus ensuring a positive action of each group of elements and permitting the operator to better control the aiming and firing of the arm.

The new construction embraces various novel features which will appear from the following description and the appended claims.

In the accompanying drawings one embodiment of the improved pistol is shown for the purpose of illustrating the invention.

In the drawings,—

Figure 1 is a partial side view of the pistol partly in elevation and partly in longitudinal mid-section, and showing the parts at rest;

Fig. 2 is a side elevation of the pistol mainly in longitudinal mid-section;

Fig. 3 is a plan view of the pistol;

Fig. 4 is a side elevation showing the pistol with some of the elements removed and some parts in mid-section, the barrel being moved back in position for firing;

Fig. 5 is a fragmentary side elevation viewed from the right, some parts being removed;

Fig. 6 is a transverse section on the line 6—6 in Fig. 4, the trigger having been pulled;

Fig. 7 is a horizontal section on the line 7—7 in Fig. 2;

Fig. 8 is an inverted view and edge view of the trigger lock removed.

Fig. 9 is an enlargement of a portion of

Fig. 6 showing the parts in a different position.

In the drawings, A is the main frame of the pistol, and B is the sliding barrel. The frame A has a grip or handle portion C within which is formed the magazine D, of usual construction. The frame has a tubular portion A' which partly embraces the barrel, and forms a slideway in which the barrel may move. The movements of the barrel are imparted by a finger piece or pull handle E, its movement being multiplied by transmission through a lever F, as will be explained. The trigger G, which may be of a usual sliding type, as shown, acts when pulled to first cock the hammer H, and then release it, so that in moving the hammer drives in a firing pin and explodes the cartridge.

Normally, the barrel is advanced as shown in Fig. 2, the uppermost cartridge 15 having been lifted from the magazine to a position in line with the barrel and directly in rear thereof. To fire the arm the operator first pulls back the piece E which slides the barrel back so that it receives the cartridge within it; until this movement is completed the trigger is locked; he next, after taking aim, pulls the trigger G, which cocks and releases the hammer and fires the arm. Then, on the release of the piece E the barrel moves forward under the stress of a spring, and the spent shell is ejected, and the next cartridge rises into position.

The general nature and operation of the invention being now understood, the particular construction shown will be explained.

The frame A comprises the tubular portion A', and butt or grip C having a marginal frame 8, and trigger guard 9. The portions comprising the frame are best formed in one piece as indicated in the drawings.

Within the frame 8 is formed the magazine D, which comprises the usual follower 13 and extensile spring 12. The follower is guided in grooves within the frame 8 as usual. For guiding the cartridges, the magazine is provided on opposite sides with grooves 14 which engage the opposite sides of the cartridge bases. The cartridges 15 comprise each the usual tubular jacket and projectile with a rear flange or base 16 which may be formed in any usual way.

The sides of the magazine are closed in

the usual manner by cheek pieces or plates 11, 11.

The pull piece E is shown as mounted on a slide 23 moving on a slideway 24 formed on the under side of the trigger guard 9, and having a bar 22 which bears against the lever F; this lever is fulcrumed at 20 near the bottom of the magazine, and its upper or free end is connected in any suitable manner to the barrel. The mode of connection shown is by introducing the rounded upper end 21 of the lever into a recess 31 in a lug 29 projecting from the barrel.

The barrel B is suitably guided within the tubular portion A' of the frame, and has any suitable connection with a spring for pressing the barrel forward. As shown, this spring 28 is a bar spring attached at 27, reacting against a fixed lug 26 in the stock, and pressing against the lever F which communicates its stress to the barrel.

The upper portion of the annular barrel support A' has a suitable opening 32 conforming preferably to the cross-sectional shape of the magazine and permitting the ejection of the cartridges after firing. The magazine is charged through this opening.

The firing mechanism of the pistol comprises any suitable hammer or firing pin; as shown, this is a bar H, pressed forward by an internal spring 34 reacting against a pin 35. The forward end of the bar is formed as a pin 36 which passes through a hole 37 in the breech block, being directed against the center or rim of the upper cartridge, for either center-fire or rim-fire cartridges, as the case may be. The hammer is pressed back by a short spring 40 the stress of which is overcome by the momentum of the hammer when it springs forward under stress of the spring 34. The trigger G is shown as mounted on a slide 38 moving in a guiding groove 39 above the trigger guard, and provided with a rearwardly projecting pusher bar 42 the rear end of which (see Fig. 7) engages a lug 43 on one side of the hammer bar H. The pusher bar is elastic, and its rear end has a slight lateral play which permits its nose to become disengaged from the lug 43 at the proper moment. The nose of the pusher bar is held in engagement with the lug 43 by its own elasticity until at the extreme pull of the trigger it is forced away and disengages the lug to release the hammer and permit it to spring forward and fire the cartridge. This is accomplished, in the construction shown, by a cam incline 45 which is engaged by the beveled end 46 of the pusher bar, and forces the nose thereof laterally, to free the lug 43. The trigger G is pressed forward by a spring 47 (Fig. 2) partly housed in the slide 38.

In order that the uppermost cartridge may stop at the proper position, a spring-pressed cartridge stop 52 is provided at the upper

end of the groove 14 so as to project into the path of the cartridge base. In order that the cartridge may be ejected after firing, provision is made for releasing the cartridge base from the stop 52. To this end provision is made for pressing back the stop 52 when the barrel is retracted to the firing position. This is best accomplished by the action of the rear end of the barrel itself. The rear face 43 of the barrel strikes the projecting stop 52 and pushes it back, while at the same time the heel of the barrel embraces the rim or base of the cartridge, except that portion of the latter which is held in the grooves 14. To enable the stop 52 to be thus pressed back it is formed as a pin projecting from a block 53 which is pressed forward by a spring 54 confined in a recess formed in this block, this spring reacting against a transverse pin 55, all as shown in Figs. 5 and 9. The stop pin 52 projects through a hole 57 which is formed as an upright slot to permit of a certain up and down movement of this stop pin, in which movement the block 53 may turn around the pin 55, which it engages by means of a slot 58. By thus mounting the block 53 carrying the stop pin 52, its front portion may move both forward and backward and up and down, being pressed forward by the spring 54, and downward by a spring 59 above it, which is shown as a leaf spring fastened on top of the breech block and having on its free end a pin 60 passing through a hole in the breech block and pressing downwardly on the forward end of the block 53.

In operation, when the face 43 on the barrel strikes the stop pin 52 it pushes it back as far as the rear face of the cartridge base, whereupon, being no longer upheld, the spring 59 is effective to press it downward against the bottom of the slot 57, as shown in Fig. 5. It remains in this position until the cartridge is fired and the barrel released, and the spent shell ejected. As this shell is forced out by the upward pressure of the next cartridge beneath, the stop pin 52 springs forward in front of the base of said cartridge, and as the latter moves upward to its position of alignment with the barrel, the stop 52 is carried up against the pressure of its spring 59 to its normal locking position, as shown in Fig. 5.

The barrel B being in the position shown in Fig. 2, that is, in its forward position, any desired number of cartridges, preferably of the type hereinbefore described and within the capacity of the magazine, are inserted therein from the top, the bases of the cartridges being positioned in the guide grooves 14. In practice the magazine will be charged with cartridges from a cartridge clip. As the cartridges are fed into the magazine as indicated, the follower member 13 is forced downwardly and the spring 12

compressed. The uppermost cartridge is held in the proper position as shown in Figs. 1 and 2, by its base engaging the cartridge stop 52. This top cartridge is thus held in the axis of the movable barrel B. The operator then draws back the lower piece E (with a finger other than the trigger finger), causing the arm 22 and lever F to force back the slidable barrel B to the position shown in Fig. 4, so that the cartridge is substantially completely enclosed by the barrel. The elements are now in firing position. When ready to fire, the trigger is pulled, and the hammer H is pushed back against the tension of its spring 34, by the end of the pusher bar 42 engaging the lug 43, thus bringing the hammer to the cocked position. At the end of the pull on the trigger the incline 45 disengages the pusher bar from the lug 43, whereupon the hammer, actuated by its spring 34, shoots forward, carrying its firing pin 36 against the cartridge, so as to explode the latter. The spent cartridge shell is ejected when the barrel B through the release of the trigger E is permitted to take its forward position; the ejection is accomplished by the upward pressure of the magazine spring, since the spent shell is released as soon as the barrel moves forward. Thereupon the next cartridge is in turn caught by its base striking the stop 52.

To facilitate the charging of the magazine, the stop 52 is so mounted as to be movable out of the path of the bases of the cartridges. To this end its block 53 is provided with any suitable means for pressing it back from the exterior. As shown, a button 62 (Fig. 3) is arranged on the exterior, with its pin or shank 63 engaging the forward portion of the block 53, and movable through a hole sufficiently large (see 63', Fig. 5) to permit of both the up and down and forward and back movements of the forward end of the block. Thus the operator, by pressing rearwardly on the button 62, may force back the block 53 against the spring 54 and thereby retract the stop 52 beyond the rear faces of the cartridge bases, so that the latter may be fed down into the engaging grooves 14.

It is highly desirable to provide means for insuring that the arm cannot be fired until the barrel is fully back with the cartridge suitably enclosed within it. To this end a trigger lock is provided, which prevents the pulling of the trigger G until the barrel is thus fully retracted. To accomplish this it is necessary to provide a locking piece movable transversely to the movement of the barrel, and which is moved by the trigger, the locking piece being immovable until a notch or slot in the barrel is brought into coincidence with the locking piece upon the complete retraction of the barrel, so that the locking piece may move transversely into

such slot. In the simple construction shown, the locking piece is a transversely-movable slide 70 which has on its under side an oblique groove 71, shown in dotted lines in Fig. 3, and in full lines in the inverted view, Fig. 8. The trigger slide has on its upper side a pin 74 which enters the groove 73 (see Figs. 4 and 6), so that as the trigger is drawn back the slide is moved laterally to the extent shown in Figs. 6 and 8, sliding in a slideway 75 formed through the frame A beneath the barrel. In Fig. 8 the pin 74 is shown in section, the full lines showing the position of rest, and the dotted lines showing the movement of the pin with the trigger slide in the direction of the arrow, and the consequent camming of the locking piece 70 to the position shown in dotted lines. The locking piece 70 cannot be thus moved until the barrel has been retracted, because to make this movement it has to enter a transverses notch or recess 76 in the bottom of the barrel (see Fig. 2), which recess is brought into coincidence with the locking slide 70 only when the barrel is fully drawn back. In any forward position of the barrel the cylindrical swell thereof enters a notch 78 in the piece 70, and any attempt to displace the latter sidewise would bring a shoulder 77 against the cylindrical face of the barrel, which would block the movement of the locking piece, and, consequently, of the trigger.

The described construction may be varied in any of numerous ways known to this art. For example, it is not essential to the invention that the hammer be cocked and released by the same pull of the trigger. Nor is the invention limited to the stopping of the topmost cartridge in line with the barrel by the specific stop construction shown. Any other stop mechanism and any other construction of cartridge whereby the cartridge is effectively stopped in line with the barrel, and after firing is released so that it may be ejected upon the next forward movement of the barrel, is within the invention in its broader aspects.

What is claimed is:—

1. In a pistol, the combination of a frame, a slidable barrel supported therein, a magazine feeding cartridges transversely to said barrel, having a spring to press the cartridges to loading position, and a movable stop adapted to engage the base of the uppermost cartridge and hold it in line with the barrel, said stop movable rearwardly and adapted to be pressed back out of engagement with the cartridge by abutment with the rearward loading movement of the barrel.

2. In a pistol, the combination of a barrel, and a stop arranged to engage the base of a cartridge in line with the barrel, said stop movable longitudinally and arranged in

line with the rear end of the barrel, so that as the barrel is moved rearwardly, it abuts the stop and presses it back out of engagement with the cartridge.

3. In a pistol, the combination of a slidable barrel, a magazine having a spring feeding cartridges transversely to the loading position, a stop arranged to engage and arrest a cartridge in line with the barrel, said stop movable longitudinally and adapted on the rearward loading movement of the barrel to be pressed backwardly thereby to free the cartridge, and movable also in direction transversely to such movement, with a spring acting to move it in such direction to bring it behind said cartridge.

4. In a pistol, the combination of a slidable barrel, a breech block, a cartridge stop movable through a hole in the breech block adapted to engage a cartridge in line with the barrel, said stop movable longitudinally with yielding means pressing it forward, and movable also in a direction transverse to such movement, with yielding means pressing it in such transverse direction, whereby when the stop is pressed backward out of engagement with the cartridge, it moves behind said cartridge.

5. In a pistol, the combination of a slidable barrel, a breech block, a cartridge stop movable through a hole in the breech block adapted to engage a cartridge in line with the barrel, said stop movable both longitudinally and vertically, and yielding means for pressing it forward and downward, whereby when the stop is pressed backward out of engagement with the cartridge, it is caused to move down behind the cartridge.

6. In a pistol, the combination of a slidable barrel, a magazine, a movable stop adapted to engage the base of the uppermost cartridge and hold it in line with the barrel, and an external projection connected to said stop for manually retracting it to permit the charging of the magazine.

7. In a pistol, the combination of a breech block, a slidable barrel, a stop engaging a cartridge in line with the barrel, a block movable in a chamber within the breech block carrying said stop, a spring pressing the block forwardly, and a spring pressing the front end of the block downwardly.

8. In a pistol, the combination of a frame, a slidable barrel adapted on sliding backward to receive a cartridge, a spring hammer having a firing pin, adapted to explode a cartridge held in said barrel, a trigger, means for preventing the pulling of the trigger except when the barrel is in its backward position, said trigger having an extension adapted to engage the hammer so that as the trigger is pulled it cocks the hammer, and means for freeing said extension from the hammer to release it.

9. In a pistol, a spring hammer, a trigger, a trigger extension comprising a push bar moved by the trigger and engaging a shoulder on the hammer, said push bar being laterally resilient, and a fixed part coacting therewith for laterally displacing said push bar to clear said shoulder.

10. The combination of claim 9, said extension comprising a laterally resilient push bar moved by the trigger, having a sear engaging a shoulder on the hammer, and a prolonged beveled portion, and the breech carrying a fixed incline engaging the said beveled portion to laterally displace said bar and free the sear from the hammer.

11. In a pistol, the combination of a frame, a slidable barrel adapted to move back and receive a cartridge, firing means including a trigger, and a trigger lock adapted to prevent the pulling of the trigger until the barrel is fully retracted, the trigger movable longitudinally of the barrel, and the trigger lock movable transversely thereof.

12. In a pistol, the combination of a frame, a slidable barrel adapted to move back and receive a cartridge, firing means including a trigger, and a trigger lock comprising a laterally-movable piece connected to and moved by the trigger, engaging the barrel and immovable except when, upon the barrel being fully retracted, a notch in the barrel is in coincidence with it.

13. The combination of claim 11, the trigger lock comprising a slide movable transversely between the trigger and barrel, the barrel having a notch which in its fully retracted position coincides with said slide, the slide engaging the barrel so as to be immovable except when it can enter said notch, and a connection between the slide and trigger whereby the pulling of the trigger moves the slide transversely, so that the trigger is locked until the slide is free to so move.

14. The combination of claim 11, the trigger lock comprising a laterally-movable piece connected to and moved by the trigger, engaging the barrel and immovable except when, upon the barrel being fully retracted, a notch in the barrel is in coincidence with it, the connection between the laterally-movable part and trigger comprising an oblique groove in the one, and a projection on the other engaging said groove.

In witness whereof, your petitioner hereunto signs its name.

OLD COLONY TRUST COMPANY,

Executor of last will and testament of Joseph H. Wesson, deceased,

By F. WINCHESTER DENIO,

Vice-President.

Attest—

R. B. FISHER,
Ass't Secy.