No. 805,695. PATENTED NOV. 28, 1905.

C. A. YOUNG.

FIREARM.

APPLICATION FILED MAR. 2, 1903.

2 SHEETS—SHEET 1.

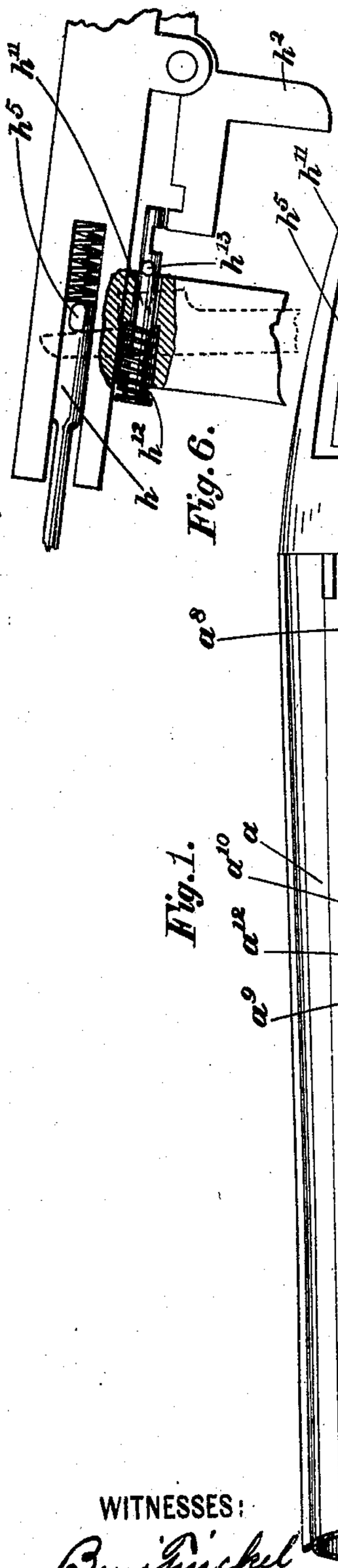

Fig. 1.

Fig. 6.

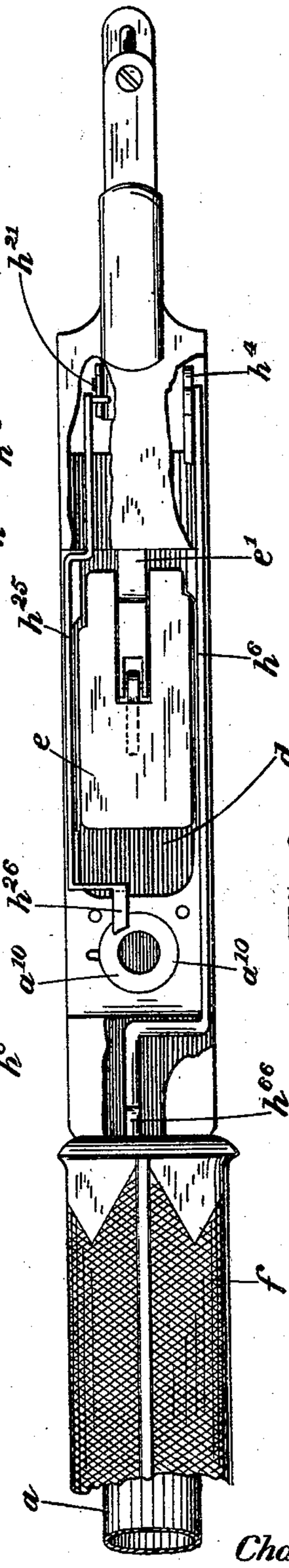

Fig. 2.

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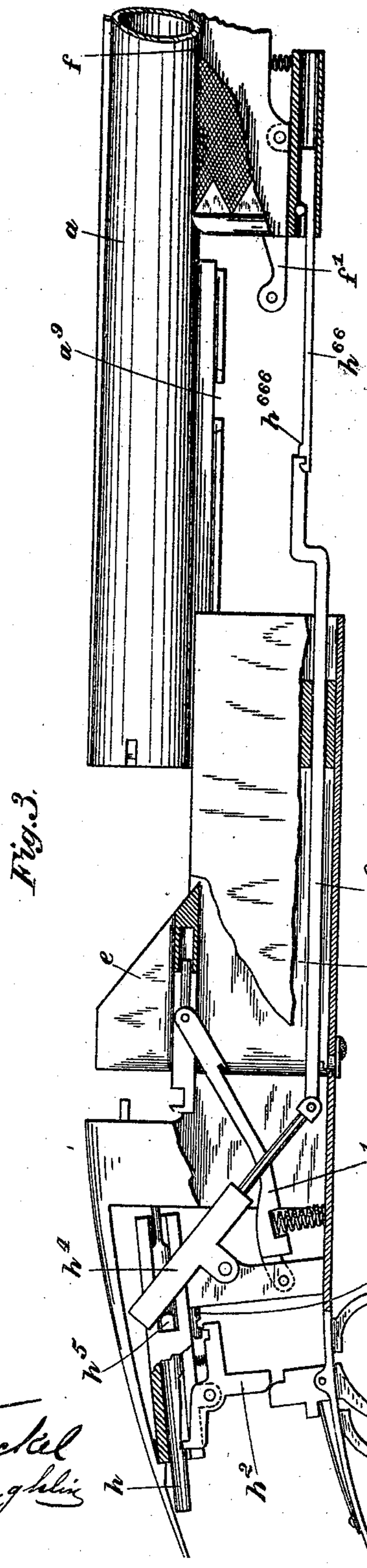

Fig. 3.

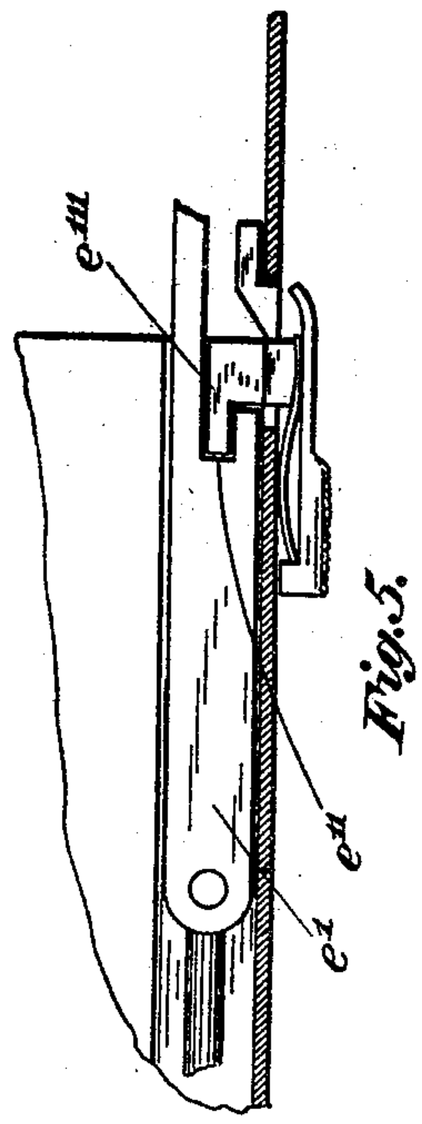

Fig. 5.

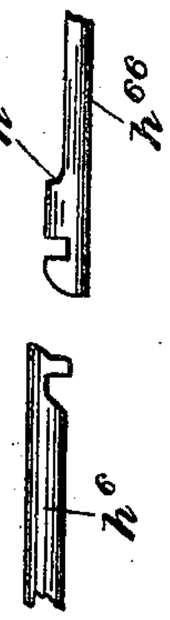

Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES A. YOUNG, OF ENON, OHIO.

FIREARM.

No. 805,695. Specification of Letters Patent. Patented Nov. 28, 1905.

Application filed March 2, 1903. Serial No. 145,786.

To all whom it may concern:

Be it known that I, CHARLES A. YOUNG, a citizen of the United States, residing at Enon, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Firearms; 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.

The object of this invention is to make improvements in a single-barreled two-shot gun; and the invention consists in the provision of improved safety devices to hold the barrel locked against the standing breech until the trigger is pulled to fire the gun or until other devices are manually operated to permit the release of the barrel from the standing breech.

The invention also consists in other constructions or combinations, as hereinafter described and claimed.

In the accompanying drawings, in which I have illustrated an embodiment of the improvements, Figure 1 is a fragmentary view of the left-hand side of a gun containing the improvements with a portion of the breech-frame removed and some of the parts in section. Fig. 2 is a similar view of the under side of the gun with portions broken out and removed. Fig. 3 is a similar view of the right-hand side of the gun with parts broken out. Fig. 4 is a detail view of the terminals of the divided cocking-rod in uncoupled position. Fig. 5 is a detail view of the cartridge-carrier-latching device. Fig. 6 is a detail of the firing-pin and trigger-locking construction, the dotted lines indicating the upper end of the barrel-latch and trigger-lock-operating lever in the position where it unlocks the barrel-latch and releases the trigger-lock.

The breech-frame, the barrel a, slidingly mounted therein, the cartridge-carrier e, mounted on the forward end of a spring-actuated lever e', the grip f, and the firing mechanism herein shown are somewhat similar in general construction to the construction shown in the Letters Patent of the United States issued to me on September 16, 1902, and numbered 709,385, and therefore need not be described in detail herein.

In the present instance the under side of the barrel has a recess a^8 near the breech end of the barrel and a recess a^9 somewhat forward of the recess a^8; but the recess a^8 is made shallower than the recess a^9, for the purpose to be hereinafter explained. Arranged in the breech-block frame forward of the carrier-chamber d is a barrel-latch a^{10}, consisting of a cylindric slug having a nose a^{12} at its upper end, said nose being square at its rear side and beveled at its forward side, the square side of the nose adapted to engage the forward recess a^9 when the barrel is closed and the rear recess a^8 when the barrel is opened. The beveled forward side of the nose a^{12} permits the barrel to be drawn rearward over the said nose toward the standing breech. The barrel-latch a^{10} is normally held up toward the barrel by a spring a^{11}, contained in said latch and seated on the bottom plate of the breech-frame. The said barrel-latch is also made of such length that when it engages the forward recess a^9 there is a small space between its lower end and the bottom plate of the breech-frame, and because the recess a^8 is shallower than the recess a^9 this space is partially or completely closed when the gun is opened to said recess a^8.

The purpose of the construction just described is to secure and lock the barrel in closed position until the gun is fired to provide a limiting-stop for the barrel in its extreme open position and at the same time permit the ready closing of the barrel from that position by simply pulling the barrel toward the breech-frame.

The breech-bolt h has a laterally-projecting cross-pin h^5, operated by the cocking-lever h^4, (see Fig. 4;) but in the present instance, as distinguished from the construction shown in my former patent herein referred to, the cocking-lever is at the opposite side of the firing-pin and the cross-pin h^5 projects from the firing-pin in both directions. Pivoted at h^{20} to the standard or post of the firing-pin frame is a lever h^{21}, having its upper end lying in front of the cross-pin h^5 and its lower end made with a notch h^{23} and a finger-piece h^{24}, the latter projecting through a slot in the bottom plate of the breech-frame. Engaging the notch h^{23} of the lever h^{21} is the rear end of a rod h^{25}, that extends forward to the barrel-latch, where it is provided with a thickened end h^{26}, adapted when projected under said barrel-latch to prevent the depression of said latch, and therefore the opening of the gun. The lower end of the lever h^{21} is pressed at its rear by a spring h^{27}, tending to throw the rod h^{25} forward, and therefore lock the barrel in closed position; but the rod h^{25} can be pulled rearward against said spring h^{27} by pulling

rearward with a finger of the hand on the finger-piece h^{24}. When the trigger is pulled, as in firing the gun, the cross-piece h^5 being pressed with a spring of greater power than that of the spring h^{27} the upper end of the lever h^{21} is pressed forward, and therefore withdraws the end h^{26} of the rod h^{25} from under the barrel-latch a^{10} and holds the rod h^{25} until the gun is recocked and the pin h^5 retracted.

Slidingly mounted in the standard of the breech-frame is a small notched pin h^{11}. This pin is furnished with a weak spring h^{12}, tending to push said pin forward; but a cross-pin h^{13} in the pin h^{11}, to abut against the rear side of the standard, limits the forward movement thereof. Said pin h^{13} also projects sufficiently to be acted on by the upper end of the lever h^{21} when the latter is moved rearward by the spring h^{27}, and the pressure of the cross-pin h^5 is withdrawn in recocking. Fig. 1 illustrates the cocked position of the gun. In this position the sear h^2, which releases the firing-pin, as usual, is free to be moved to fire the gun by reason of the position of the notched trigger-locking pin h^{11}. Fig. 6 illustrates the position of the pin h^{11} after the gun is fired, and in this position said pin prevents the operation of the sear h^2, and therefore the pulling of the trigger, until the gun is closed and recocked.

The carrier e is lifted out of its chamber d under the breech end of the barrel by a spring e^9, and it is depressed into said chamber by the breech end of the barrel in closing and loading substantially as in my former patent hereinbefore referred to. Sometimes, however, it may be desirable not to use the weapon as a repeating or two-shot gun, and in such event the carrier should be latched down in its chamber d. To effect this, I now provide the under side of the carrier-supporting lever e' with a notch e^{11} to be engaged by a catch e^{111}, sliding in a slot in the bottom plate of the breech-block frame and operative independently of the trigger, said catch being provided with a finger-piece on the exterior of the bottom plate and a small spring to make sufficient friction to hold or assist in holding the catch in the position to which it is moved, as clearly indicated in Fig. 5.

The cocking-rod for operating the cocking-lever h^4 is composed of two parts—one, h^6, attached to the cocking-lever, substantially as shown in my former patent herein referred to, and the other, h^{66}, slidingly attached to the sliding grip f. The parts of the cocking-rod automatically hook or couple together in fixed but detachable relation to each other, so that in assembling the gun it shall not be necessary to manipulate the parts of the cocking-rod to effect their coupling. In Fig. 4 the parts h^6 and h^{66} are each shown to be made with a notch and a beveled end, but placed in reversed position and in line with each other, so that when the two ends come together in closing the gun in assembling they will, by the contact of the beveled ends, spring apart and hook together, as indicated in Fig. 3. After the parts of the cocking-rod are hooked together, as shown in Fig. 3, the abutting shoulders behind the notches and the hook ends prevent their separation longitudinally with respect to each other. In taking down the gun the parts of the cocking-rod are separated by springing the coupling ends asunder with the fingers of the hand. The movement of the part h^{66} in the grip f is limited by the contact of the shoulder h^{666} with the end of the grip.

The grip f slides, as before indicated, with a limited play on the barrel, and it is provided at its rear end with a rigid arm f', carrying at its rear end an antifriction-roller. Pivoted at a^{14} between the sides of the forward end of the breech-block frame is a lever a^{13}, the rear end of which engages the barrel-latch a^{10} and the forward end of which is shaped and located to be wiped by the antifriction-roller on the rear end of the arm f', so as to depress said barrel-latch out of the forward recess a^9 in the under side of the barrel preparatory to moving the barrel from the standing breech. This, however, it will be remembered, can only be done after the end h^{26} has been withdrawn from under the latch a^{10}, as before stated. Thus it will be observed that the danger of firing the cartridge or shell after the gun is partially opened or before the gun is completely closed is avoided.

When the gun is used as a repeating or two-shot gun, a shell or cartridge is first put into the carrier and the carrier depressed into its chamber to permit the insertion of a second shell or cartridge into the breech of the barrel. The barrel is then closed on the standing breech, as indicated in Fig. 1, when the gun is ready to be fired. The discharged shell is then withdrawn and ejected upon the opening of the barrel and the loaded shell or cartridge brought by the carrier into position to load, substantially as in my former patent hereinbefore referred to.

When the weapon is to be used as a single-shot gun, the carrier is locked down in its chamber and the shells loaded into the breech of the barrel, fired, and ejected as though there were no carrier.

In my claims where I use the term "cartridge" I mean either a shot-cartridge or a bullet-cartridge, because the improvements described are useful either in a shotgun or a rifle.

What I claim, and desire to secure by Letters Patent, is—

1. In a firearm, the combination of a breech-frame, a firing-pin and a cocking-lever therefor, a sliding barrel and a sliding grip on the barrel, a cocking-rod connecting the cocking-lever and the grip, a latch for latching the barrel in its closed position, means operative

by the grip for disengaging the latch upon the opening of the gun, and a spring-actuated device to lock the barrel-latch when the firing-pin is cocked.

2. In a firearm, the combination of a breech-frame, a firing-pin and cocking-lever therefor, a sliding barrel, and a sliding grip on the barrel, a cocking-rod connecting the cocking-lever and grip, a barrel-latch for latching the barrel in its closed position, means operative by the grip for disengaging the latch from the barrel upon the opening of the gun, a spring-actuated device to automatically lock the barrel-latch when the firing-pin is cocked, and means whereby said spring-actuated device may be operated manually to unlock the barrel-latch.

3. In a firearm, the combination of a breech-frame, a firing mechanism including a firing-pin and a sear, a cocking-lever for the firing-pin, a sliding barrel, a sliding grip, a cocking-rod connecting the grip and the cocking-lever, a barrel-latch for latching the barrel in its closed position, a spring-actuated device for locking said latch when the barrel is closed, and means for locking the sear when the barrel-latch is unlocked.

4. In a firearm, the combination of a breech-frame, a firing mechanism including a sear, a sliding barrel, a barrel-latch for latching the barrel in its closed position, a device for locking the sear, and means for simultaneously locking the barrel-latch and releasing the sear.

5. In a firearm, the combination of a breech-frame, a sliding barrel, a latch for engaging the barrel in both the closed and open positions thereof, a sliding grip with means thereon for operating the barrel-latch to permit the opening of the barrel, and a spring-actuated device for locking said barrel-latch in the closed position of the barrel, and means for preventing the operation of said spring-actuated device in the open position of the barrel.

6. In a firearm, the combination of a breech-frame, a firing mechanism, a sliding barrel, a barrel-latch, a sliding grip, means for locking the barrel-latch operative by the firing mechanism to unlock said latch, and means on the grip for operating said latch after it is unlocked by the operation of the firing mechanism.

7. In a firearm, the combination of a breech-frame, a firing mechanism including a firing-pin, a sliding barrel having at its under side the rear notch a^8 and the forward notch a^9, the former being shallower than the latter, the spring-actuated barrel-latch a^{10} adapted to engage either of said notches to lock the barrel, the barrel-latch-locking rod h^{25}, the lever h^{21} to which said rod is attached, a spring to project said rod under the barrel-latch to lock the same when engaged with the forward notch a^9, said lever being arranged to be operated by the firing-pin to withdraw the rod from under the barrel-latch when the gun is fired.

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

CHARLES A. YOUNG.

Witnesses:
GEO. M. FINCKEL,
SAMUEL W. LATHAM.