(No Model.)

T. G. BENNETT.

FIREARM.

No. 564,421. Patented July 21, 1896.

Fig. 1

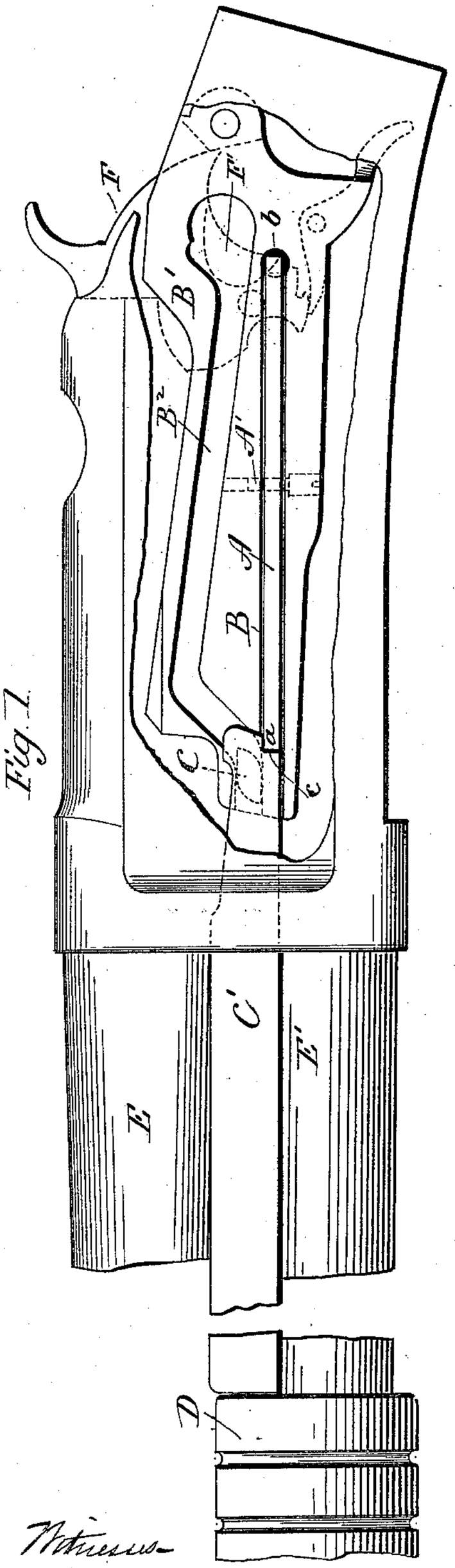


Fig. 3

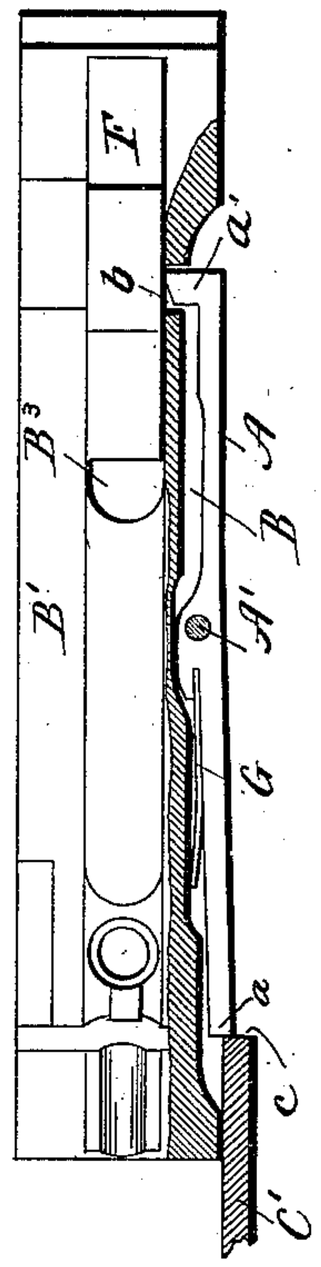


Fig. 4

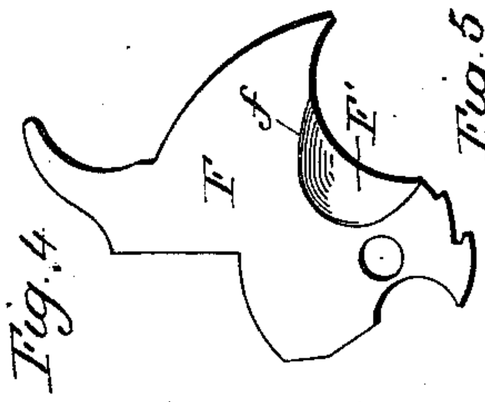


Fig. 5

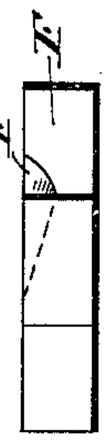


Fig. 2

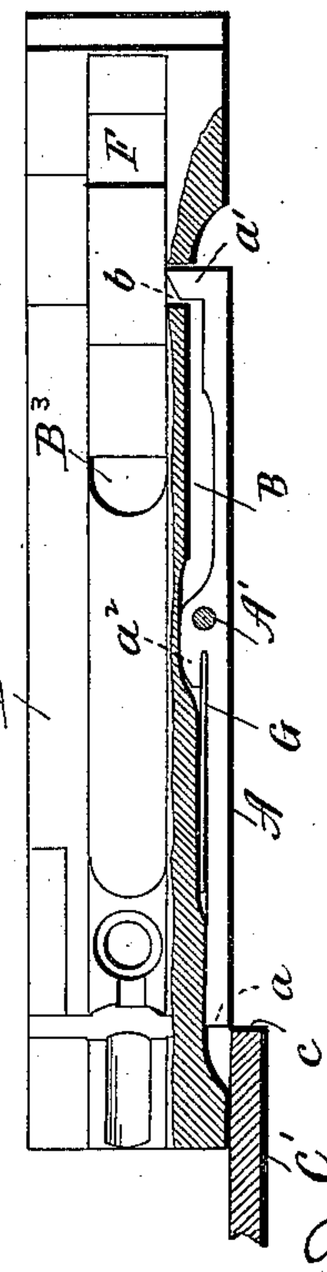


Fig. 6

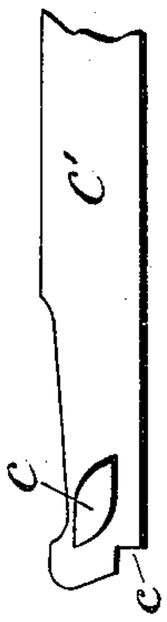
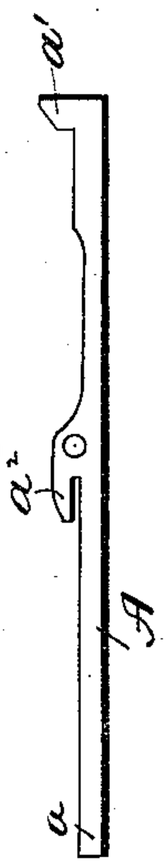


Fig. 7



Witnesses—
J. N. Stunning
Lillian D. Kelley.

Thomas G. Bennett.
Inventor.
By Attys.
Earle Seymour

UNITED STATES PATENT OFFICE.

THOMAS G. BENNETT, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

FIREARM.

SPECIFICATION forming part of Letters Patent No. 564,421, dated July 21, 1896.

Application filed January 31, 1896. Serial No. 577,507. (No model.)

To all whom it may concern:

Be it known that I, THOMAS G. BENNETT, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken view, in side elevation, of a gun provided with my improved stop-lever; Fig. 2, a detached view, partly in plan and partly in horizontal section, of the locking-block and carrier, showing my improved stop-lever as swung by the hammer when the gun is fired without rearward draft upon the sliding handle; Fig. 3, a similar view showing the stop-lever as sprung by the hammer and as blocking the rearward movement of the action-bar when rearward draft is imposed upon the handle at the time of firing the arm; Fig. 4, a detached view, in side elevation, of the hammer; Fig. 5, a plan view thereof; Fig. 6, a detached broken view, in inside elevation, of the rear end of the action-bar; Fig. 7, a detached plan view of the stop-lever.

My invention relates to an improvement in that class of firearms in which the action mechanism is operated by means of a sliding handle which is reciprocated back and forth in line or substantially in line with the longitudinal axis of the gun-barrel, the object of my invention being to provide simple, reliable, and effective means for preventing the user from prematurely opening the gun in the interval between the falling of the hammer and the explosion of the cartridge by exerting an untimely rearward draft upon the sliding handle.

With these ends in view my invention consists in a stop-lever interposed between and coacting with the action-bar and the hammer.

My invention further consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention, as herein shown, I employ a stop-lever A, fulcrumed upon a vertically-arranged pin or stud A′, and located in a long, horizontal, outwardly-opening groove B, formed in the left-hand side wall of the carrier B′, which in the gun shown has the additional function of a "locking-block," and may be so termed. The said groove is located below the path cam-slot B^2, formed in the carrier for the reception of the operating-lug C, located at the rear end of the action-bar C′, the forward end of which is connected with the sliding handle D, which is constructed and arranged in any suitable manner to be moved back and forth in a line parallel or substantially parallel with the longitudinal axis of the gun-barrel E. As herein shown, the handle slides on the tubular magazine E′, but that is not imperative. The forward end of the stop-lever is made square to coact with a notch *c*, formed in the rear end of the action-bar, with which the forward end of the lever makes what I may term a "jar-off" engagement, for the reason that it is such an engagement as will be broken for freeing the bar from the lever by the jar or recoil following the firing of the gun.

The rear end of the stop-lever is provided with an inwardly-projecting beveled finger *a*′, which plays through an opening *b*, leading transversely inward from the rear end of the groove B into the vertical longitudinal clearance space or slot B^3, formed in the carrier for the clearance of the hammer F.

The rear portion of the stop-lever—that is, that portion of it lying rearward of its fulcrum A′—is made elastic, but so stiff that under normal conditions it does not yield, but under the action of the hammer swings the stop-lever, so as to compress its spring G and clear its forward end from the action-bar. The said spring G is, as shown, located forward of the stud A′, and interposed between the forward end of the lever and the bottom of the groove B, and secured to the lever by the insertion of its inner end under the finger a^2 thereof; but a spring otherwise constructed and arranged may be employed in place of the spring G, as is obvious.

The hammer F is constructed with a crescent-shaped notch F′, which, as the hammer falls, clears the inwardly-extending finger *a*′ of the stop-lever until just before the hammer reaches its fired or down position, when

the wall of the notch engages at about the point *f* with the said finger and forces the same outwardly out of the clearance-space B^3, as shown in Fig. 2, whereby the spring G will be compressed and the forward end of the stop-lever cleared from the notch *c* in the action-bar, provided the same has not been engaged with the forward end of the stop-lever by the rearward movement of the action-bar under untimely rearward draft upon the sliding handle.

In the normal and right use of the arm the stop-lever acts, but to no purpose. When the hammer F is cocked and cleared from engagement with the finger *a* of the stop-lever, the spring G of the lever acts to swing the lever on its fulcrum to move its forward end into the path of the action-bar and its finger into the path of the hammer. Now, when the hammer falls, it will, just before it reaches its down position, engage with the finger *a'* and force the same outward and overcome the tension of the spring G and turn the lever on its fulcrum, so as to clear its forward end from the action-bar, provided the user is not pulling rearward upon the sliding handle; but if he is pulling rearward upon the sliding handle at the time he pulls the trigger, the rear end of the action-bar will be engaged with the forward end of the stop-lever, the forward end of which, as already stated, is normally held in the path of the action-bar by means of the spring G. Now when the hammer falls and engages with the finger *a'*, an effort will be exerted to swing the lever on its fulcrum; but the grip between the forward end of the lever and the action-bar being superior in power to the force required to spring the rear end of the stop-lever the same springs and allows the hammer to go into its down position, while the forward end of the lever still stands as an abutment behind the rear end of the action-bar, which it holds against rearward movement, and therefore blocks the opening of the gun until the explosion of the cartridge, the recoil of which is sufficient to cause an involuntary disengagement of the rear end of the action-bar and the forward end of the stop-lever, which, when disengaged from the bar, is immediately swung inward out of the path of the same by the effort of the elastic rear end of the lever to recover its normal shape, for when the forward end of the stop-lever is engaged by the action-bar the stop-lever is placed, by the falling of the hammer, under the tension required for clearing the forward end of the stop-lever from the bar when the bar and lever are involuntarily separated by the recoil following the explosion of a cartridge in the chamber of the gun-barrel. Some means placed under tension by the falling of the hammer when the forward end of the lever is engaged by the bar must be employed for causing the lever to be cleared from the path of the bar when the lever and bar are involuntarily separated, as described. In the construction herein shown the elastic rear end of the lever constitutes such means, but it is obvious that a spring made independent of but coacting with the stop-lever might be placed under tension by the falling of the hammer and serve the same purpose as making the rear end of the lever itself elastic. Means placed under tension by the falling of the hammer for taking advantage, so to speak, of the involuntary disengagement of the bar and the lever may be considered as an element of my combination, whether made independent of the lever or integral therewith, as shown.

It will thus be seen that my improved stop-lever, interposed as it is directly between the action-bar and the hammer and coacting with both of the said parts, constitutes an effectual block or check against the opening of the gun by the user if he is pulling rearward upon the sliding handle at the time he pulls the trigger and in the interval between the falling of the hammer and the explosion of the cartridge.

I would have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention. Thus my improved stop-lever is not confined to use in guns like that shown; nor need it necessarily be mounted in the carrier or the locking-block of a gun.

I do not broadly claim means for blocking the gun against being prematurely opened, in combination with a light spring to throw such means into operative position, and also in combination with a heavier spring, under the control of the hammer, to throw such means into a retired position, as such matter is the invention of John M. Browning, and embodied in his application, Serial No. 583,357, filed May 16, 1896.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a firearm, the combination with a sliding handle, of an action-bar extending rearwardly therefrom, a hammer, a stop-lever constructed and arranged to be engaged by the said bar to block the premature rearward movement of the same, and means placed under tension by the falling of the hammer for clearing the lever from the bar when it is disengaged therefrom by the recoil following the explosion of a cartridge in the gun-barrel.

2. In a firearm, the combination with the sliding handle, action-bar, hammer, breech-closure and locking-block thereof; of a stop-lever mounted in the locking-block and constructed and arranged to be engaged by said bar to block the premature rearward movement of the same, and means placed under tension by the falling of the hammer for clearing the lever from the bar when the lever and

bar are involuntarily separated by the recoil following the explosion of the cartridge in the gun-barrel.

3. In a firearm, the combination with a sliding handle, of an action-bar extending rearwardly therefrom, and a stop-lever constructed and arranged to be engaged by the said bar to block the premature rearward movement of the same, and having its rear end made elastic and coacting with the hammer, whereby it yields to permit the falling of the hammer which puts it under the tension required for clearing it from the bar when it is disengaged therefrom by the recoil following the explosion of a cartridge in the gun-barrel.

4. In a firearm, the combination with a sliding handle, of an action-bar extending rearwardly therefrom, a hammer, and a stop-lever constructed and arranged to be engaged by the said bar to block the premature rearward movement of the same, and having its rear end made elastic and furnished with an inwardly-projecting finger for engagement by the hammer, which, when premature rearward draft is being exerted upon the sliding handle, coacts with the said finger to spring the rear end of the lever, which yields to permit the hammer to complete its falling movement for the operation of the firing-pin, and which is thereby placed under the tension required for clearing it from the action-bar when the lever and bar are involuntarily separated by the recoil following the explosion of a cartridge in the chamber of the gun-barrel.

5. In a firearm, the combination with the action-bar and hammer thereof, of a stop-lever having its rear end made elastic and constructed with an inwardly-projecting finger, an action-bar coacting with the forward end of the stop-lever, a hammer constructed with a clearance-notch and engaging with the said finger to swing the stop-lever just before it reaches its down position, and a spring combined with the forward end of the stop-lever for normally holding the forward end thereof in the path of the action-bar and the finger thereof in the path of the hammer, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS G. BENNETT.

Witnesses:

DANIEL H. VEADER,

PERCY S. RAY.