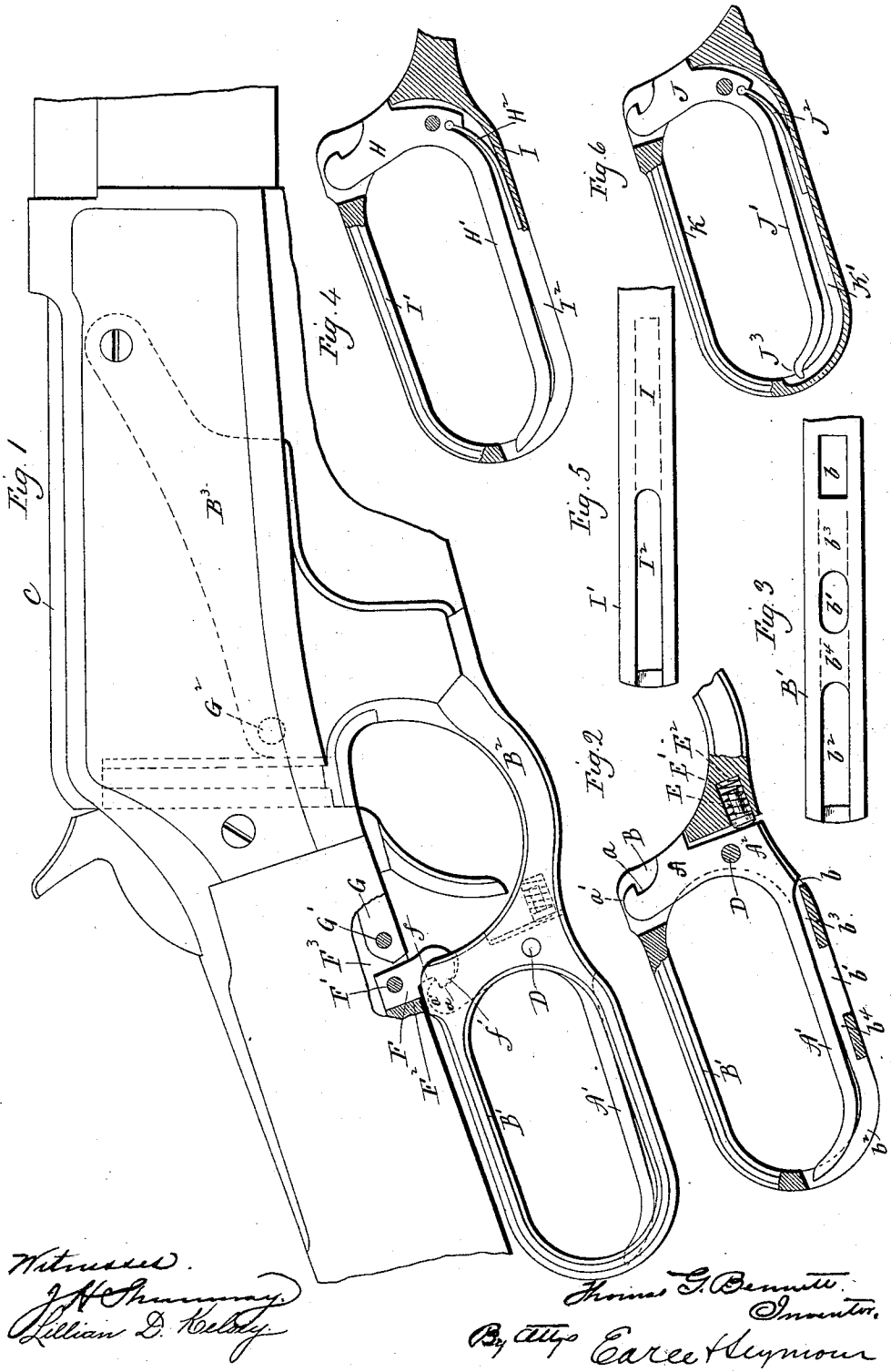
(No Model.)

T. G. BENNETT.

LEVER LOCKING MEANS FOR FIREARMS.

No. 589,687. Patented Sept. 7, 1897.



Witnesses.
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UNITED STATES PATENT OFFICE.

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

LEVER-LOCKING MEANS FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 589,687, dated September 7, 1897.

Application filed June 14, 1897. Serial No. 640,619. (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 Lever-Guns; 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 one form which my improvement may assume; Fig. 2, a broken view of the rear end of the operating or finger lever of the gun, the said end of the lever being shown in vertical section; Fig. 3, a reverse plan view of the said end of the lever; Fig. 4, a view corresponding to Fig. 3, but showing a modification; Fig. 5, a reverse plan view of Fig. 4; Fig. 6, a view corresponding to Figs. 3 and 4, but showing another modification.

My invention relates to an improvement in that class of portable firearms called "lever-guns" for the reason that they are operated by a swinging lever, the object of the present invention being to provide for automatically locking the levers of such guns in their closed positions in such a manner that they may be unlocked without appreciable effort.

With these ends in view my invention consists in the combination in a lever-gun, with the swinging operating or finger lever thereof, of a lever-hook mounted in the said lever and comprising a beak, and a long rearwardly-extending tailpiece which is arranged to lie along the inner face of the outer portion of the bow of the said lever, and means with which the beak of the said hook is automatically engaged when the lever is brought into its closed position.

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 lever-hook consisting of a forwardly-turned beak A and a long rearwardly-extending tailpiece A′, the outer end of which is bent or turned upward. I employ the term "lever-hook" because the hook is mounted in the lever and holds it in its closed position. The beak A of the said lever-hook is located in a vertical or substantially vertical slot B, formed for its reception in the base of the bow B′ of the operating or finger lever, which also comprises a bowed shank B^2 and two arms B^3, the extreme forward ends of which are connected in any approved manner with the reciprocating breech-bolt C. By forming the slot for the reception of the beak of the hook in the base of the bow of the operating-lever I am enabled not only to secure ample room for the reception and operation of the beak of the hook, but also to locate the same in such a way that it will be well protected and in such a position that it will be highly effective in its resistance to the tendency of the lever to be started into its open position by the recoil following the firing of the gun. The said lever-hook is hung upon a horizontal pin D, passing transversely through the base of the bow B′ and the vertical slot B, formed therein, as aforesaid. The tailpiece A′ of the hook lies along the inner face of the outer portion of the bow B′, the said portion of the bow being grooved and slotted for the partial reception of the tailpiece, the end of which is held against lateral deflection by the side walls of the slot b^2, which it lies in. As shown, the bow is formed for the purpose just mentioned with slots b, b', and b^2 and with grooves b^3 and b^4. For making the lever-hook yielding as well as for maintaining it in its locked position I employ a small plunger E and a spiral spring E′, which encircles it, the said spring and plunger being located in a pocket E^2, formed in the shank B^2 of the operating or finger lever, and the plunger being engaged with the heel A^2 of the lever-hook at a point below the horizontal pin D, on which the same is swung. It will be seen by reference to the drawings that the said spring exerts a constant effort to throw the beak A of the lever-hook forward.

The forward edge of the beak A of the lever-hook is constructed with an undercut a and a rounded operating-face a', adapting the beak to be readily engaged with a rearwardly-turned fixed frame-hook F, which depends

from the "wrist portion" of the frame of the gun and which I call the "frame-hook," because it depends from the gun-frame.

In speaking of the frame-hook as depending from the gun-frame I mean to cover the idea of its dependence from any fixed portion of the gun in right position for being engaged by the lever-hook and do not limit myself to securing the frame-hook to any particular portion of the gun. The rear edge of the said frame-hook has an undercut *f* and a rounded operating-face *f'*, which respectively coact with the undercut *a* and operating-face *a'* of the lever-hook. As herein shown, the said frame-hook is suspended so as to be fixed in position from a pin F', mounted in the tang F^2 of the gun, the said hook being located in the rear end of the long slot F^3, formed in the said tang to receive the link G, the rear end of which is pivotally connected with the said tang by a pin G', while its forward end is connected by a pin G^2 with the arms B^3 of the operating or finger lever in the usual manner. I do not, however, limit myself to any particular way of supporting the frame-hook F so long as the same is located in position for its engagement by the lever-hook when the operating or finger lever is swung into its closed position.

When in the operation of closing the gun the operating or finger lever is brought by the hand of the user of the gun nearly into its closed position, the operating-face *a'* of the beak A of the yielding lever-hook engages with the operating-face *f'* of the rigid frame-hook. The spiral spring E', encircling the plunger E, which engages with the heel A^2 of the lever-hook, is then compressed, allowing the beak of the said lever-hook to swing rearwardly until the undercut *a* of the lever-hook is brought into line with the undercut *f* of the frame-hook, when the spring E' reasserts itself and effects the engagement of the two hooks, whereby the lever is positively locked in its closed position, in which it will be held with obvious advantage against the recoil following the explosion of a cartridge in the chamber of the gun-barrel. When the user of the gun desires to open it again, he exerts a slight pressure with the backs of his fingers upon the long rearwardly-extending tailpiece of the lever-hook, whereby the light coiled spring E' is compressed and the lever-hook swung rearwardly and disengaged from the frame-hook, thus unlocking the operating or finger lever and permitting it to be swung into its open position. The effort required for operating the lever-hook preparatory to the opening of the gun is so slight as to be almost inappreciable and the action is so simple and natural and so completely in accord with the movement required for swinging the lever into its open position that after a little practice it will be done unconsciously by the user of the gun.

In the modified construction shown by Fig. 4 of the drawings the lever-hook is constructed with a beak H and a long rearwardly-extending tailpiece H' and operated by means of a flat spring H^2 instead of by a spring-actuated plunger. The said flat spring H^2 is inserted at its forward end into the heel of the hook and has its rear end arranged to lie in a groove I, formed in the outer portion of the bow I' of the lever, the outer end of the outer portion of the said bow being formed with a long slot I^2, Fig. 5, for the reception of the rear portion of the tailpiece of the hook.

In the construction shown by Fig. 6 of the drawings the lever-hook is composed of a beak J and a long rearwardly-extending tailpiece J' and operated by a flat spring J^2, practically corresponding to the spring H^2 before mentioned. In this construction the tailpiece lies along the outer portion of the bow K of the lever, the said outer portion of the bow not being slotted, but being formed with a long shallow groove K', upwardly turned at its rear end for the reception of a finger J^3, formed at the extreme end of the tailpiece J' of the lever-hook for preventing the said end of the tailpiece from being laterally deflected.

The modified constructions shown by Figs. 4 and 5 and by Fig. 6 are both adapted to operate with rigid frame-hooks corresponding to the frame-hook F herein shown and described or to any equivalent thereof.

In view of the modifications suggested and of others which may obviously be made 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 lever-hook may be used with any form of frame-hook or equivalent thereof and in any of the different forms of lever-guns, not being limited in use to a gun like that shown in the drawings.

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

1. In a lever-gun, the combination with an operating or finger lever adapted at its forward end to be connected with the action mechanism of the gun, and formed at its rear end with a bow; of a lever-hook located within the bow of the operating-lever and formed at its forward end with a beak and having a long, rearwardly-extending tailpiece which is arranged to lie along the inner face of the outer portion of said bow; and means connected with and depending from the frame of the gun with which the beak of the hook is automatically engaged when the lever is brought into its closed position.

2. In a lever-gun, the combination with an operating or finger lever adapted at its forward end to be connected with the action mechanism of the gun, and furnished at its rear end with a bow, the base or forward end of which is formed with a vertical slot; of a lever-hook comprising a beak located in the

said slot upon a horizontally-arranged pivot, and also comprising a long, rearwardly-extending tailpiece lying along the inner face of the outer portion of the bow; and a frame-hook depending from the frame of the gun for being engaged by the beak of the lever-hook when the lever is brought into its closed position.

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

THOMAS G. BENNETT.

Witnesses:
DANIEL H. VEADER,
THOMAS C. JOHNSON.