

(No Model.)

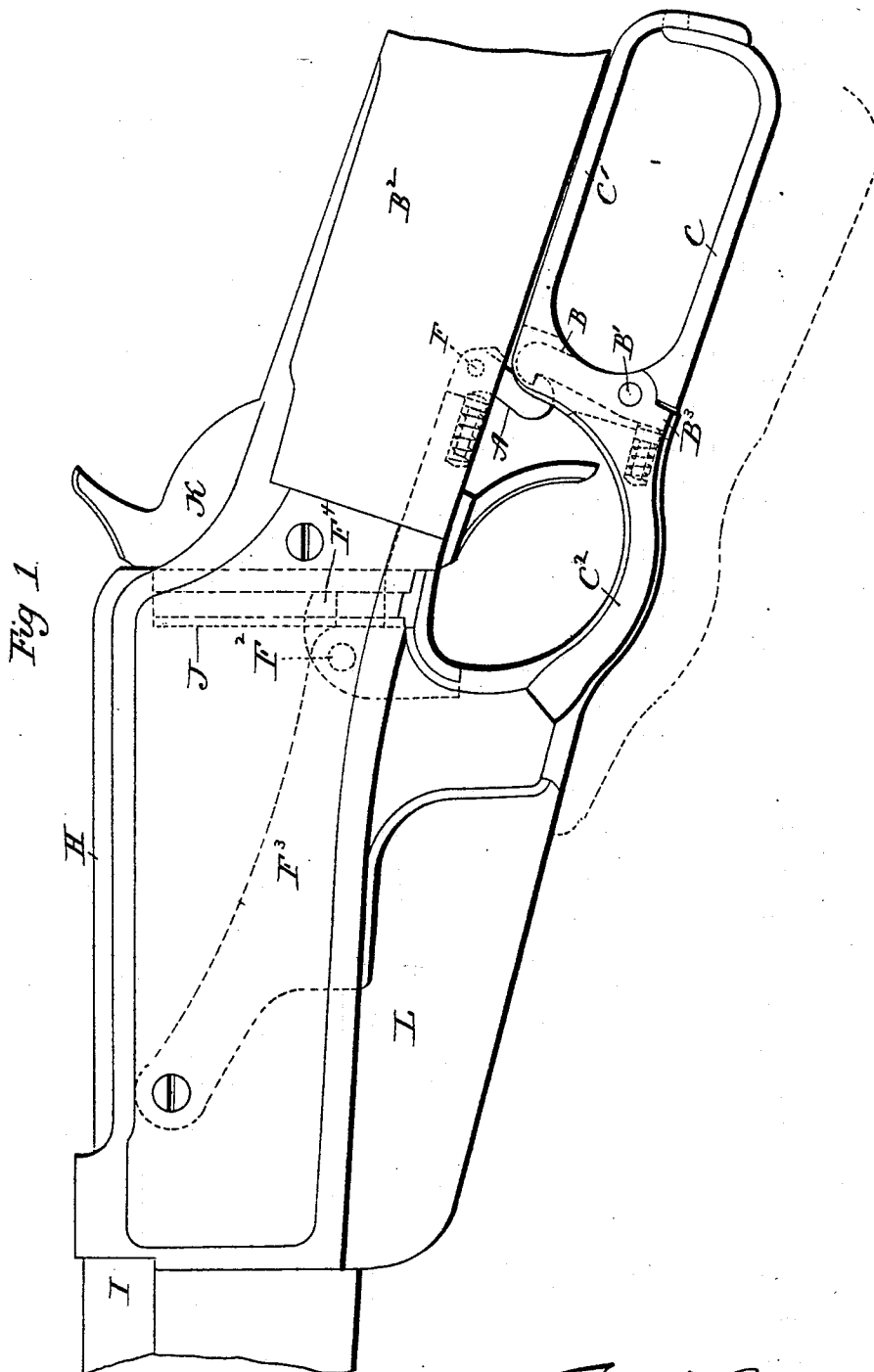
2 Sheets—Sheet 1.

T. G. BENNETT.

LEVER LOCKING MECHANISM FOR LEVER GUNS.

No. 588,315.

Patented Aug. 17, 1897.



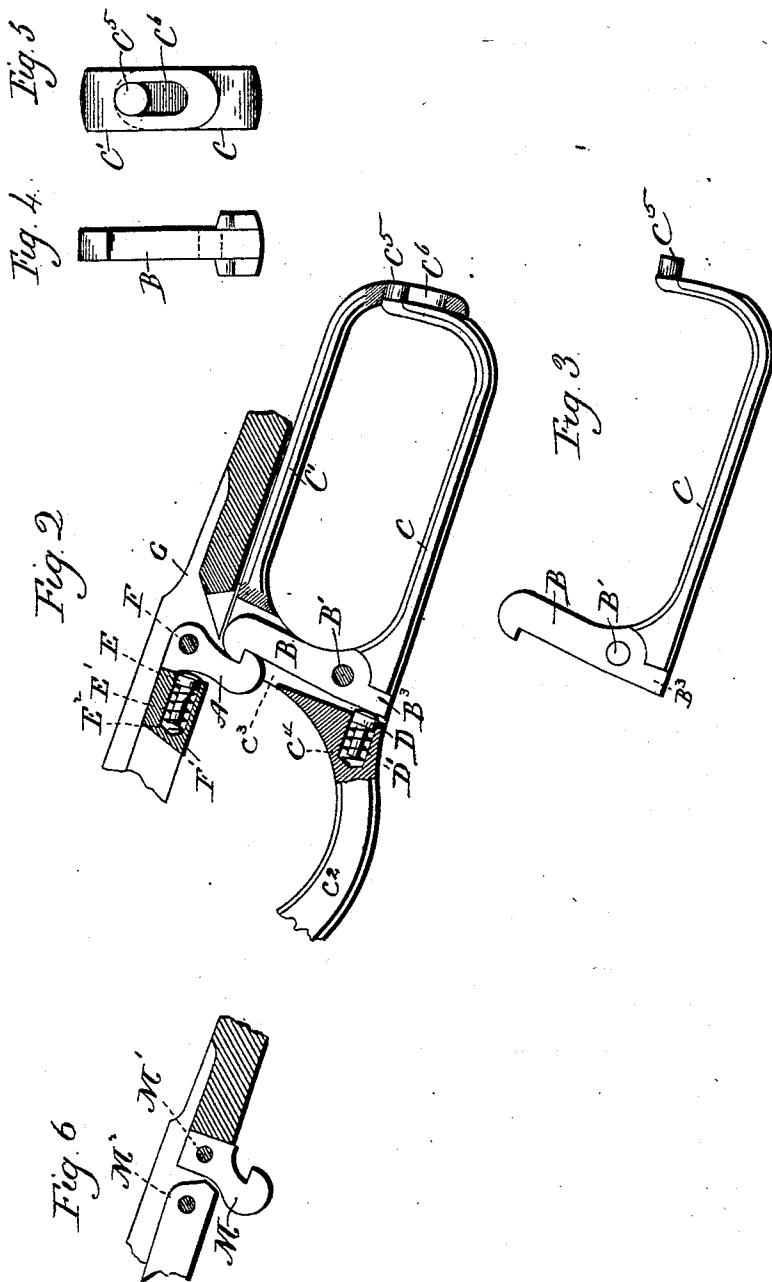
Witnesses.
John H. Shumway
Lillian D. Kelsey.

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

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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 MECHANISM FOR LEVER-GUNS.

SPECIFICATION forming part of Letters Patent No. 588,315, dated August 17, 1897.

Application filed October 26, 1896. Serial No. 610,024. (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 a gun constructed in accordance with my invention may assume; Fig. 2, a broken sectional view of the gun, showing the frame and lever-hooks, together with a portion of the operating or finger lever and some other parts; Fig. 3, a detached view, in side elevation, of the pivotal bow-piece of the bow of the lever, the said piece including the lever-hook; Fig. 4, a view of the part referred to in front elevation; Fig. 5, a view in rear elevation of the bow of the lever; Fig. 6, a broken view, partly in section, showing a modified construction in which the frame-hook is rigid and unyielding.

My invention relates to an improvement in that class of portable firearms called "lever-guns," from the fact that the action mechanism of such a gun is operated by means of a swinging lever located below its frame, the object of the present invention being to provide simple, compact, and effective means for positively locking the lever in its closed position and constructed with particular reference to locking the lever automatically and to permitting it to be unlocked without appreciable effort.

With these ends in view my invention 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 pivotal yielding frame-hook A, depending below the wrist B² of the butt-stock and having its nose or beak facing rearward. This hook I call the "frame-hook," because it is connected with the frame of the gun. It is located to the rear of the trigger of the gun, as shown in Fig. 1 of the draw-

ings, and coacts with a lever-hook B, having a forwardly-extending nose or beak, and by me called a "lever-hook," because it is associated with the operating or finger lever of the gun. The operating or finger lever of the gun is located centrally below the gun-frame and is operated back and forth in the vertical plane thereof. It is connected at its extreme forward end with the longitudinally-movable breech-bolt II and about midway of its length with the gun-frame through the medium of the link F' and extends rearwardly back of its pivotal connection with the said link for being grasped by the hand for operation thereby. This lever may assume some variations of form, but will not depart from the above-mentioned characteristic features of construction and arrangement. The said lever-hook is made integral with and at the forward end of a non-integral pivotal bow-piece C, forming the outer portion of the bow of the said operating or finger lever, the inner portion of the bow being formed integral with the rear end of the shank of the said lever and constituting what I shall hereinafter call the "integral bow-piece" C'. The said pivotal bow-piece C forms, as it were, a rearwardly-extending operating-tail for the lever-hook C and is hung upon a pivot B', the ends of which are supported in the rear end of the shank C² of the lever, the said portion of the shank being constructed with a vertical slot C³ for the reception of the lever-hook and the forward end of the pivotal bow-piece, of which it forms a part. The lower end of the said lever-hook is formed with a lug or toe B³, the forward face of which is impinged against by the enlarged head of a small plunger D, encircled by a spiral spring D', the said plunger and spring being located in a deep pocket or spring-chamber C⁴, formed in the shank C² of the finger-lever.

The rear end of the pivotal bow-piece C is turned upward and bowed and formed with a rearwardly-extending stud-like stop C⁵, which plays back and forth in a slot C⁶, formed in the downwardly-turned rear end of the integral bow-piece C', the engagement of the stop C⁵ with the end walls of the slot determining the play of the pivotal bow member

C upon its pivot B'. The frame-hook A is made yielding by the engagement with its forward edge of the head of a small plunger E, encircled by a spiral spring E' and located in a small cylindrical pocket or chamber E².

When the lever is lifted into its closed position, the upper face of the beveled nose of the lever-hook B engages with the beveled lower face of the frame-hook A, whereby the lever-hook is forced backward against the tension of its spring D', which will be sufficiently compressed to permit the hook to retire enough for its nose to pass up behind that of the nose of the frame-hook. Then as soon as the beak of the lever-hook has passed above the beak of the frame-hook the spring D' will assert itself to swing the lever-hook forward and positively couple it with the frame-hook, whereby the operating or finger lever is positively locked in its closed position. I will here add that when the two hooks are brought into engagement or the lever is closed the pivotal yielding frame-hook A will also yield somewhat, but my purpose in making the frame-hook yielding is to provide for the sufficient retirement of the frame-hook to permit the two levers to hook together even when the lever-hook is prevented from yielding by an upward pressure on the rear end of the pivotal bow-piece of the finger-lever.

In the particular gun shown the frame-hook A is hung upon the horizontal pin F, which pivotally connects the rear end of the link F' with the gun-frame through the tang G of the gun. The rear end of the said link is vertically slotted for the reception of the upper end of the frame-hook A and is formed with the chamber E², before referred to. I do not, however, limit myself to suspending the frame-hook from the pin by which the link is pivoted to the frame. The forward end of the link is pivotally connected by means of a pin F², Fig. 1, with the rear portions of the arms F³, formed by bifurcating the forward end of the finger or operating lever, the said arms being pivotally connected in the usual manner with the breech-bolt H, which is reciprocated back and forth in a line parallel with the longitudinal axis of the gun-barrel I. The forward end of the link is shaped to form a hook F⁴, which engages with and operates the vertically-movable recoil-block J, which is moved up across the path of and behind the breech-bolt H for the purpose of locking the same in its closed position. The hammer K may be of any approved construction, as may also be the box-magazine L, the bottom of which depends below the gun-frame and which is embraced by the two arms F³ of the operating or finger lever. The construction just described is not, however, essential to the operation of the invention in hand, although the same is well applicable to it.

In operating a gun provided with a yielding frame-hook A and with a yielding lever-hook B the lever is positively locked automatically when it goes into its closed position

by the engagement of the two hooks, as shown in Fig. 1. The lever, being thus positively locked, cannot be thrown into a partially-open position by the recoil following the explosion of the gun, nor by any other cause. However, for opening the gun the pressure naturally imposed upon the outer portion of the bow of the lever causes the compression of the spring D' and permits the pivotal bow-piece to swing enough to clear the nose of the lever-hook B from the nose of the frame-hook A. I particularly wish to emphasize the point that the effort required for thus unlocking the lever is inappreciable in the operation of the gun. Therefore, without complicating the operation of the gun in any way or interfering with the facility of its operation, I secure the important advantage of automatically locking the lever positively in its closed position.

In carrying out my invention I may apply it to almost any lever-gun and do not at all limit myself to such a gun as described, and shown in Figs. 1 to 5, inclusive, of the drawings.

In Fig. 6 of the drawings I have shown the use of a rigid frame-hook M, which is thus distinguished from the frame-hook A before mentioned, which is yielding. It is shown as being held in place by a pin M', located directly to the rear of the rear end of a link M², which may be supposed to be in other respects like the link F'.

I would have it understood that I do not limit myself to the exact construction herein shown, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

I am aware that it is not broadly new to provide lever-guns with spring-actuated lever-hooks for positively locking their levers in the closed positions thereof. I am also aware that a lever-gun having a laterally-swinging lever pivotally connected by its rear end with the gun-frame and provided at its forward end with a lever-hook for positively locking the lever in its closed positions is old. I do not, therefore, broadly claim the provision of a lever-gun with a lever-hook, nor a lever-gun having its lever provided with a lever-hook for locking it in its closed position.

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

1. In a lever-gun, an operating or finger lever having a pivotal bow-piece forming a portion of the bow of the lever and comprising a lever-hook constructed and arranged to automatically engage with a part connected with the frame of the gun for positively locking the lever in its closed position.

2. In a lever-gun, the combination with an operating or finger lever having a pivoted bow-piece forming a portion of the bow of the lever and comprising a lever-hook; of a frame-hook depending from the frame of the gun in position to be automatically engaged

by the said lever-hook for positively locking the lever in its closed position, one of the said hooks being yielding.

3. In a lever-gun, the combination with an operating or finger lever having a pivotal bow-piece forming a portion of its bow and comprising a lever-hook; of a yielding frame-hook with which the lever-hook is automatically engaged for locking the lever in its closed position.

4. A lever-gun having an operating or finger lever the outer portion of the bow whereof is formed by a pivotal bow-piece constructed at its forward end with a lever-hook located in a vertical slot formed in the base of the bow and constructed to automatically engage with a part connected with the frame of the gun for automatically locking the lever in its closed position.

5. In a lever-gun, the combination with the frame thereof, of an operating or finger lever the outer portion of the bow whereof consists of a pivotal piece terminating at its forward end in a lever-hook; of a link connected at its forward end with the lever and at its rear end with the frame of the gun at a point adjacent to the forward portion or base of the bow of the lever when the same is in its closed

position, and a frame-hook depending from the pin employed to connect the rear end of the link with the frame of the gun, and arranged to be automatically engaged by the lever-hook when the lever is brought into its closed position.

6. A lever-gun having an operating or finger lever the outer portion of the bow whereof consists of a pivotal bow-piece terminating at its forward end in a lever-hook which is located in a vertical slot formed in the forward end or base of the said bow and adapted to be automatically engaged with a part connected with the gun-frame for locking the lever in its closed position, and the said bow-piece extending rearward in position to be engaged by a downward movement of the back of the hand of the user of the gun and connected at its extreme rear end with the rigid inner portion of the bow of the lever.

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

THOMAS G. BENNETT.

Witnesses:

THOMAS C. JOHNSON,
DANIEL H. VEADER.