

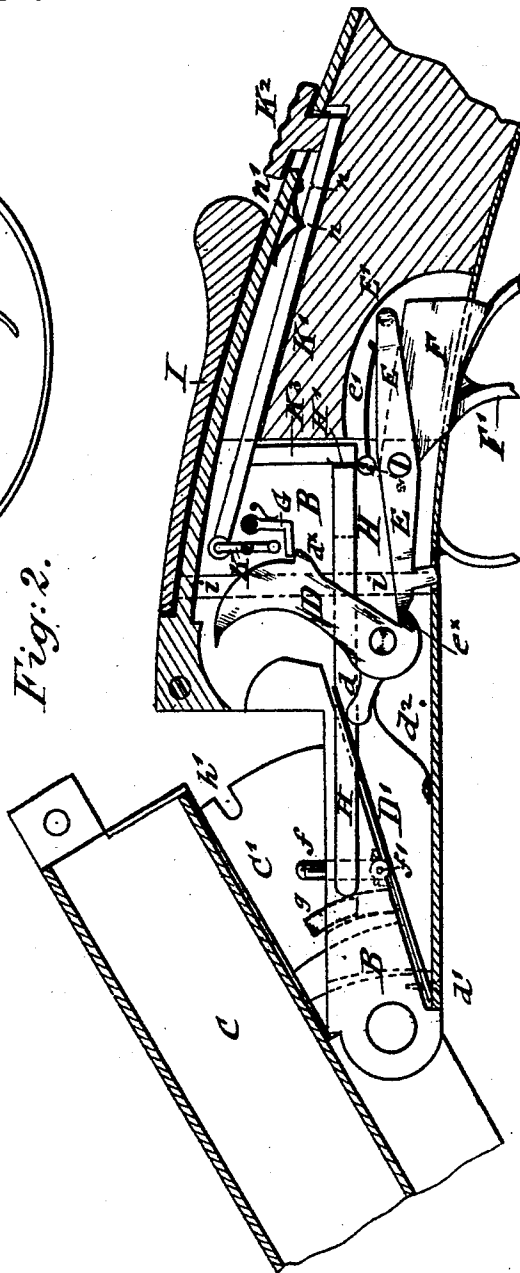
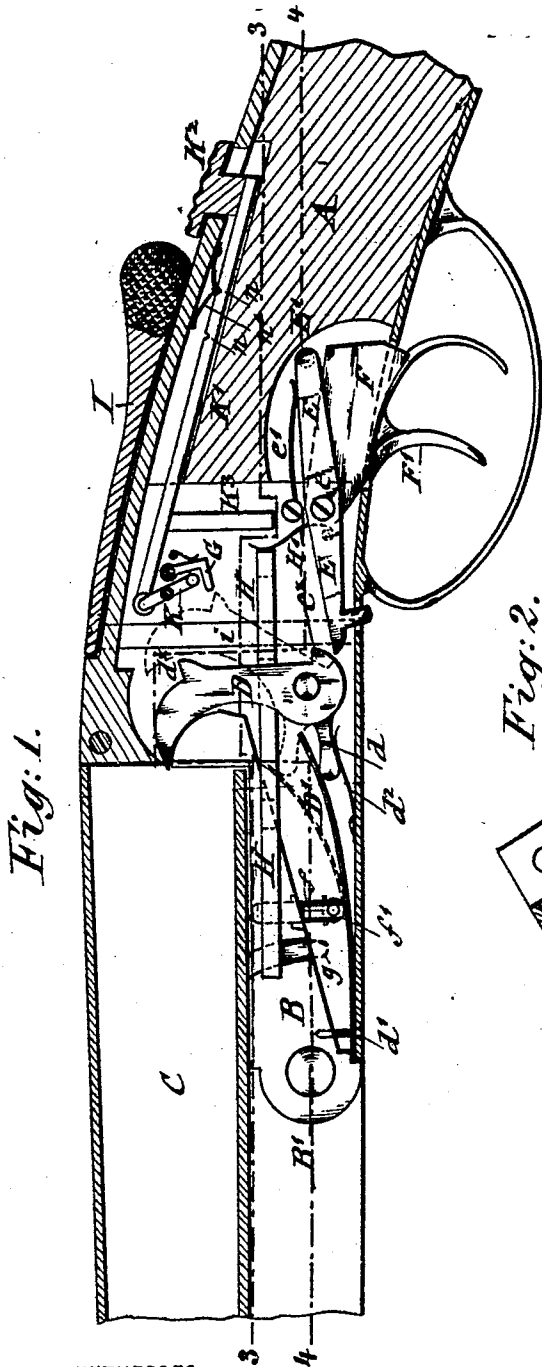
(No Model.)

3 Sheets—Sheet 1.

J. CONNER.
LOOK FOR BREAKDOWN GUNS.

No. 517,032.

Patented Mar. 27, 1894.



WITNESSES:

Marion Hall
Harry Willard Griffiths.

INVENTOR

Joseph Comer
BY
April H. Paegeuer
ATTORNEYS.

(No Model.)

3 Sheets—Sheet 2.

J. CONNER.
LOCK FOR BREAKDOWN GUNS.

No. 517,032.

Patented Mar. 27, 1894.

Fig. 3.

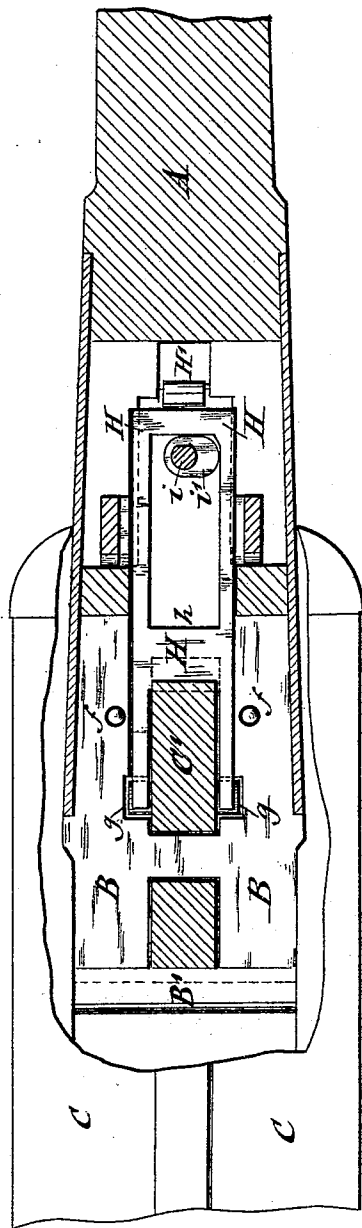
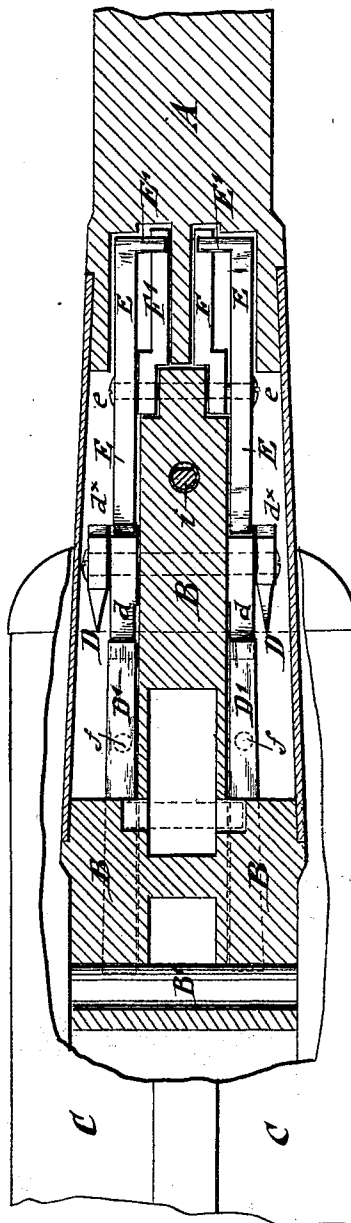


Fig. 4.



WITNESSES:

Marion Hall
W. Willard Griffiths.

INVENTOR

Joseph Conner
BY *Lucas & Piquet*
ATTORNEYS.

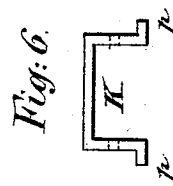
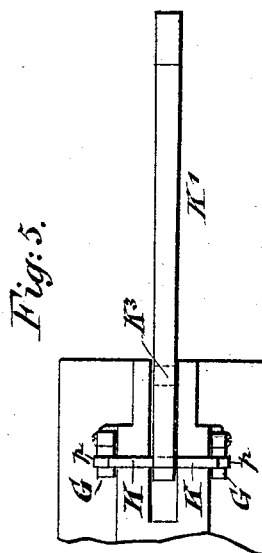
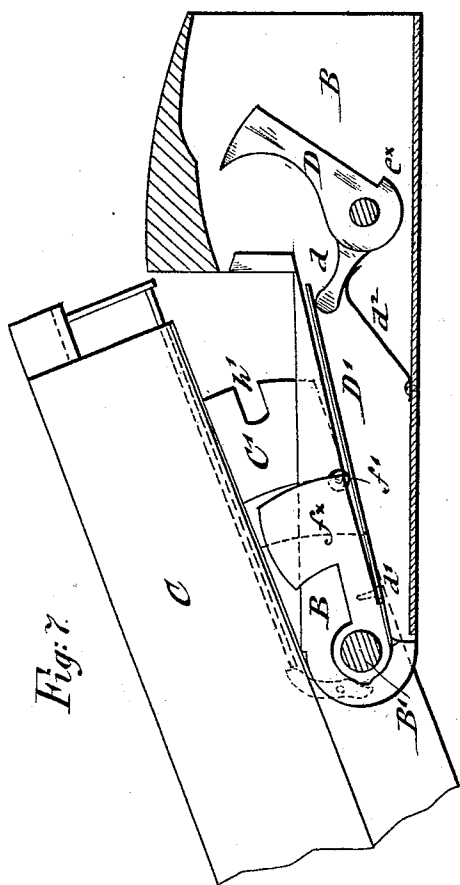
(No Model.)

3 Sheets—Sheet 3.

J. CONNER.
LOCK FOR BREAKDOWN GUNS.

No. 517,032.

Patented Mar. 27, 1894.



WITNESSES:

Marion Hall
H. Willard Griffiths.

INVENTOR

Joseph Conner
BY *George & Raegenier*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH CONNER, OF NEW YORK, N. Y.

LOCK FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 517,032, dated March 27, 1894.

Application filed January 6, 1893. Serial No. 457,544. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH CONNER, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Gun-Locks, of which the following is a specification.

This invention relates to certain improvements in the gun-lock, for which Letters Patent were granted to me heretofore, No. 464,215, dated December 1, 1891, the improvements being designed with a view of simplifying the construction of the "hammerless" breech-loading gun described in said Letters Patent, providing a safety-device for the strikers, so as to retain them in cocked position and of securing an auxiliary locking-device for the barrels below the breech of the same; and the invention consists first, of a push-piece for setting the main-spring to tension by the closing of the barrel; secondly, of a forked slide-bolt for locking the barrels below the breech for the forging; and thirdly, of a safety-device for retaining the strikers in cocked position, said device being automatically set by the backward motion of the slide-bolt.

The invention consists further of certain details of construction and combination of parts, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1, represents a side-elevation of my improved gun-lock, showing the barrel and gun-frame in section, and the gun in closed position. Fig. 2, is a similar view showing the gun in open position. Fig. 3, is a plan-view of the gun-lock partly in section on line 3 3, Fig. 1. Fig. 4, is also a plan-view partly in section on line 4 4, Fig. 1. Figs. 5 and 6 are details of the auxiliary locking-bolt and of the safety-device for the striker, and Fig. 7, is a modified construction of a push-piece, to be used in place of the pushpin.

Similar letters of reference indicate corresponding parts.

Referring to the drawings A represents the stock, B the forging which connects the stock with the pivot-pin B' on which the barrels C swing.

D is the striker, E the sear, which turns on a pivot e to which the triggers F F' are also

pivoted. The rear-end of the sear E is provided with a pin E' that is engaged by the trigger in the usual manner. The striker D is pivoted at the lower part to the forging B and provided with a forwardly-extending arm d at its lower part which is engaged by a main-spring D' that is attached loosely at its forward end to the forging B so as to have a certain play on its fastening screw d', so that it may be readily moved into inclined position, as shown in Fig. 2. A projecting shoulder e^x on the lower rear-part of the striker D is engaged by the front-end of the sear E, the rear-end of which is acted upon by a spring e'. Below the arm d is arranged a striker-spring d² that has a tendency to move the striker D in backward direction as soon as the pressure of the main-spring D' is released.

The front-part of the forging B is provided vertically below the lowest part of each barrel C with a slot in which is guided a loose push-pin f that is rounded off at its upper end and provided at its lower end with an anti-friction roller f'. The slot for the push-pin f is preferably made wider at its lower end so as to form a beveled shoulder against which a transverse pin abuts, to prevent the dropping out of the push-pin f on turning over the gun. The anti-friction roller f' at the lower end of the push-pin f rests on the main-spring D' and serves to press the same in downward direction when the gun is closed. The push-pin f forces thereby the main-spring D' in downward direction so as to impart tension to the same and impart the necessary force to the striker when the cartridge is to be exploded. When the barrel is open, so as to insert the cartridge into its breech, the push-pin f is released from the main-spring so that the latter follows the motion of the striker D which is lifted by its spring d² and placed into cocked position, as shown in Fig. 2.

The arrangement of the push-pin f for setting the main-spring to tension, does not much weaken the forging and furnishes a simple and inexpensive means for accomplishing this object, it being also of special advantage when altering old guns to guns of the hammerless type. In place of the push-pin f, a loose angular push-piece f^x that is applied to the pivot-pin B' may be used, as shown in Fig. 7.

This angular piece f^x is provided at its lower rear-part with an anti-friction roller f' that forms contact with the main-spring, said piece rising and descending with it. The upper edge of the push-piece f^x is made slightly convex so as to be engaged by the under side of the barrel, when the same is pressed in downward direction so as to set the main-spring to tension. In this case the main-spring may be attached at its forward end to the under side of the push-piece f^x while the forward end of the push-piece may be provided with a projection or boss that serves to engage an intermediate push-lever which assists in operating the shell-extractor, as shown in Fig. 7.

The lug C' , which is arranged intermediately between the two barrels of the gun, is provided at each side with a projecting abutment g , which abutments are engaged when the gun is in closed position, by a forked slide-bolt H , that is moved in backward direction by a cam i' on the spindle i of the top-lever I , and in forward direction by a spring H' , which presses on the rear-end of the slide-bolt H , so that the front-ends of the slide-bolt are moved over the abutments g . The lug C' is simultaneously engaged by a transverse piece h of the slide-bolt H , which piece enters into a recess h' of the lug C' , said slide-bolt being in line with the recess h' and the upper edges of the abutments when the gun is closed and forming thereby an auxiliary locking-device for the gun. When the gun is opened, the front-ends of the slide-bolt H press against the abutments g on the lug C and hold the spring H' open until released by the closing of the gun. The slide-bolt H produces a double and very effective locking-action below the breech in addition to the ordinary locking-device, by which the barrels are locked to the stock. The cam i' on the spindle i which is attached to the inner end of the top lever I engages the rear-part of the slide-bolt H and moves the same in backward direction when the gun is to be opened. This backward motion takes place simultaneously with the release of the locking-device by the action of the top-lever I . The spring H' presses on the rear-end of the slide-bolt H and moves the latter in forward direction over the abutments g on the closing of the gun. As the top-lever is simultaneously released and returned into its initial position, the cam i' releases the rear-part of the slide-bolt H , and permits the latter to be moved forward by the tension of its spring into engagement with the abutments g and the recess h' of the lug C' , when the gun is closed.

In connection with the strikers is used a safety-device by which they are retained in locked position, so as to prevent the accidental discharge of the barrels, until it is desired to get them ready for firing. The safety-device consists of an L-shaped and spring-actuated safety-catch G and of a U-shaped piece K , which works with both locks of the bar-

rels and which is fulcrumed to the forging at a point near the cocked position of the strikers. The upper middle-portion of the U-shaped piece K is pivoted to the end of the safety-bar K' , the roughened or grooved thumb-piece K^2 of which projects through an opening of the tail-piece. The safety-bar K' is provided with two notches n which engage with the guard-spring n' that serves to retain the piece K in the different positions to which the same is set relatively to the strikers. The ends of the U-shaped piece K are provided with laterally-extending pins p that serve to engage the L-shaped safety-catches G , which normally engage the shoulders d^x on the rear-parts of the strikers D , so as to retain the same in cocked position until the safety-catches are released from the same by the backward motion of the piece K which is operated by the safety-bar K' and the forward motion imparted thereto by its thumb-piece. This forward motion imparts a backward oscillating motion to the end-pins of the U-shaped piece K and releases thereby the safety-catch G from its engagement with the strikers, so that the gun is ready to be discharged. The projecting ends of the U-shaped piece K hold the safety-catches G against the tension of their springs and prevent them from returning to their normal position until the thumb-piece of the safety-bar is moved again in backward direction, by which the U-shaped piece K is moved forward while the safety-catches are returned by the tension of their springs to their former position so as to hold the strikers in cocked position. When the safety-catches are freed from contact with the strikers by the push-bar, each striker can be quickly moved forward by the action of its main-spring, as soon as the sear is released by the trigger, so that the cartridge is exploded. For opening the gun, the top-lever is moved sidewise and thereby the locking-device withdrawn so that the barrels can be swung on the pivot B' into open position. The empty shells are removed and new cartridges inserted, the barrels being then closed again and locked automatically by the return of the top-lever to its former position above the stock and the action of the forked slide-bolt. By the closing action of the barrels, the main-spring is set to tension by the push-pin and the slide-bolt H moved over the abutments of the lug by the action of its spring. During the closing motion of the barrels, the ends of the slide-bolt remain in contact with the abutments until they can pass over and re-engage the upper edges of the same. The backward motion of the slide-bolt H produces also, by its engagement with a downwardly-extending arm K^3 of the safety-bar K' the backward motion of the safety-bar and thereby the forward motion of the U-shaped piece K and the forward motion of the safety-catches by their springs as before described, so that the locking of the strikers by the safety-device is au-

tomatically accomplished. The gun being closed and the safety-device applied to the strikers, it can be handled without any danger of an accidental discharge of the same.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a striker, a main spring therefor, a lock chamber provided with
10 a slot in its top, a loose sliding push pin disposed in said slot between the barrel and the main spring and operated by pressure of the barrel when closing to set the main-spring to tension, substantially as described.

15 2. The combination of a striker, a main-spring therefor, a lock chamber provided with a slot in its top, a loose sliding push pin disposed in said slot between the barrel and the main-spring and operated by pressure of the
20 barrel when closing to set the main-spring to tension, said push pin being provided at its lower end with a stop for holding it within the lock chamber, substantially as described.

25 3. The combination of a gun stock, a detachable barrel provided with a lug, abutments on opposite sides of said lug, a forked slide bolt adapted to engage said abutments, and a spring for pressing said slide bolt forward thereby producing an auxiliary locking
30 of the barrels, substantially as described.

4. The combination of a gun having swinging barrels, a lug arranged between said barrels, abutments on opposite sides of said lug, a forked slide bolt, a spring adapted to press
35 said slide bolt forward over said abutments, a top lever provided with a spindle, and a cam on said spindle adapted to move said slide bolt backward thereby releasing the locking device, substantially as described.

40 5. In a gun, the combination of a stock, swinging barrels attached thereto, a lug between said barrels, arc-shaped abutments on opposite sides of said lug, a recess in said lug in

a line with the upper edges of said abutments, a forked slide bolt provided with a transverse
45 strip adapted to engage said recess, a spring for moving said slide bolt forward, a top lever provided with a downwardly extending spindle, and a cam on said spindle adapted to move said slide bolt in backward direction, 50 substantially as described.

6. The combination of a forked slide bolt adapted to engage a lug between the barrels of a gun, means for withdrawing the slide bolt from said lug, and a safety device for
55 the strikers actuated by said slide bolt so as to set it in position for engaging the strikers when they are moved in cocked position, substantially as set forth.

7. The combination of a lug arranged be-
60 tween the barrels of a gun, said lug having an abutment at each side, a forked and spring-actuated slide bolt adapted to engage said lug, means for withdrawing the slide bolt from the lug, and a safety device for the strikers, 65 the push bar of which is provided with an arm extending into the path of the slide bolt so that the safety device is automatically applied to the cocked strikers by the action of the slide bolt on the closing of the gun, sub-
70 stantially as set forth.

8. The combination with the strikers of a safety device composed of a U-shaped piece operated by a push bar having a thumb piece at its rear end, and pivoted and spring-actu-
75 ated safety-catches that are engaged or released by the U-shaped piece so as to be released from or applied to the strikers, substantially as described.

In testimony that I claim the foregoing as
80 my invention I have signed my name in presence of two subscribing witnesses.

JOSEPH CONNER.

Witnesses:

CHARLES SCHROEDER,

H. WILLARD GRIFFITHS.