

(No Model.)

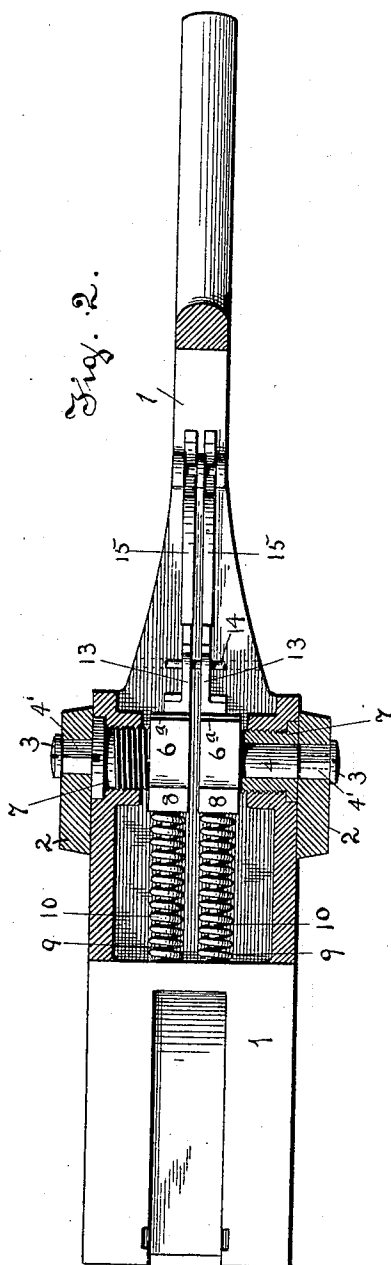
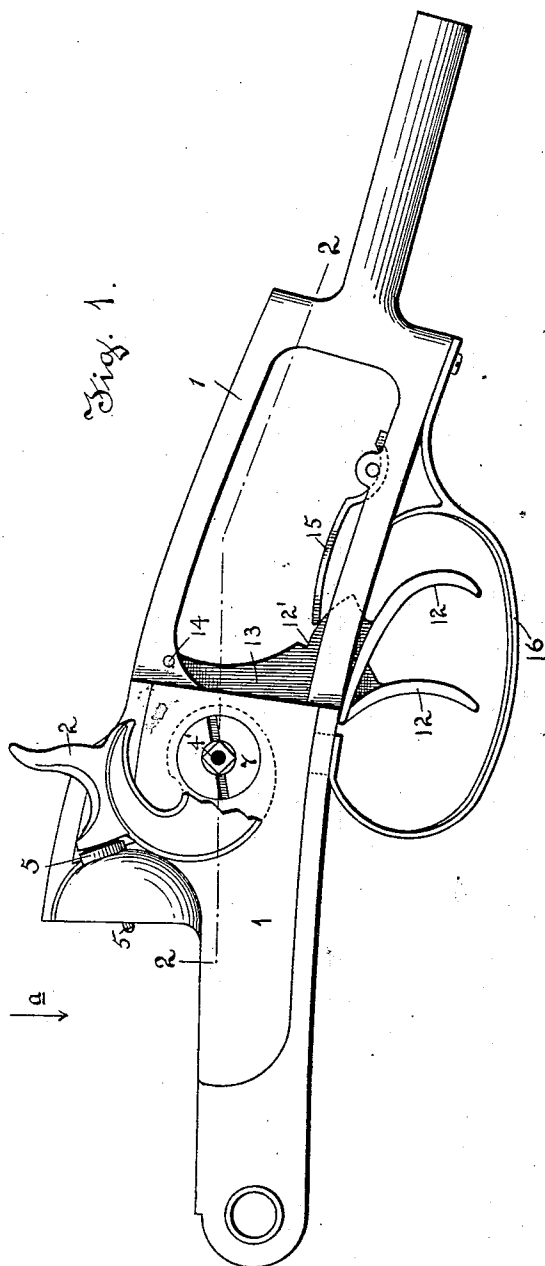
3 Sheets—Sheet 1.

M. BYE.

GUN FRAME FOR DROP DOWN FIREARMS.

No. 582,776.

Patented May 18, 1897.



Witnesses
A. Whitings
M. J. Kahn.

By his Attorney

John C. Dewey.

Inventor
Martin Bye.

(No Model.)

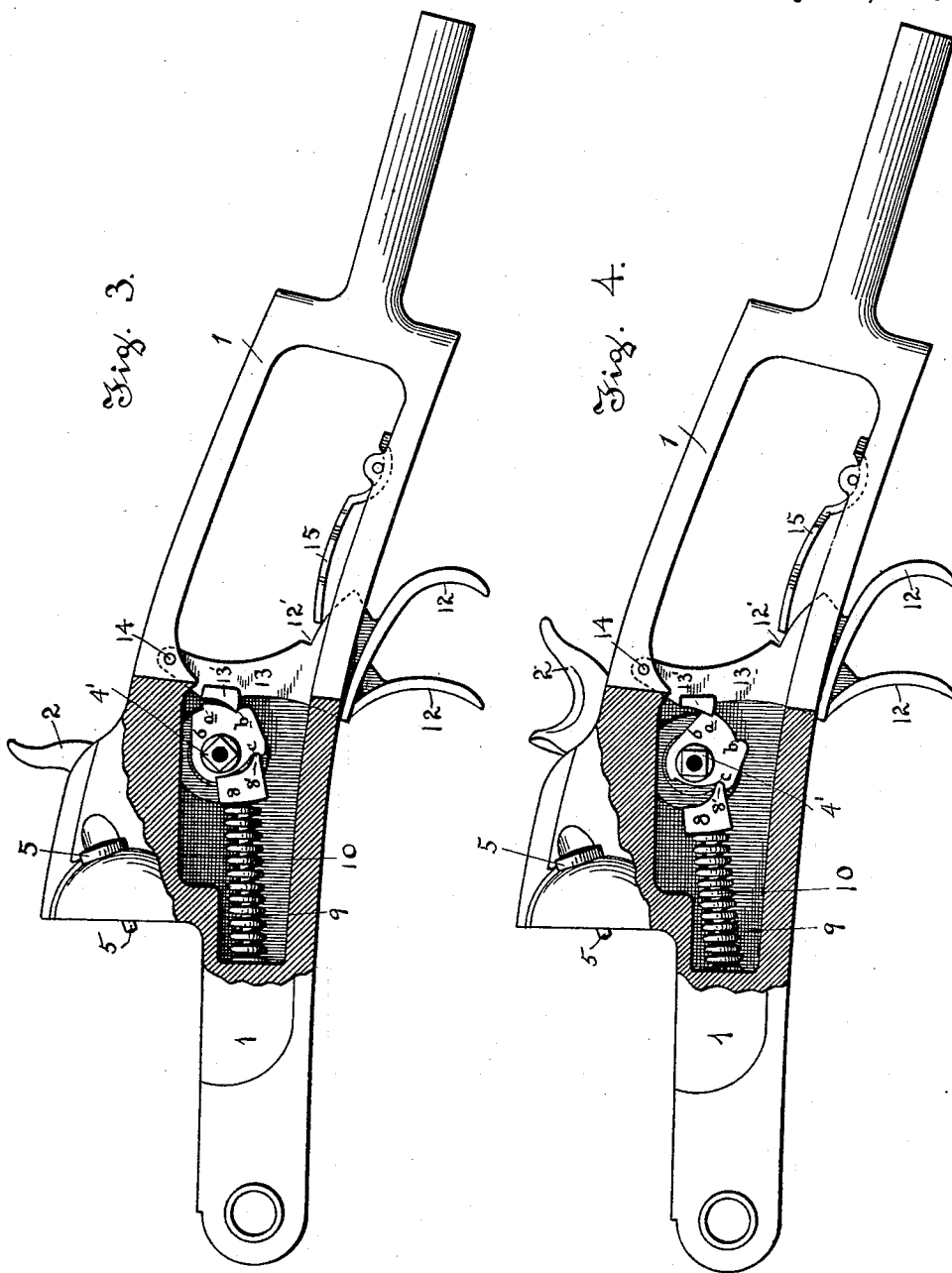
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Witnesses
acknowledging
M. J. Galvin.

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Inventor
Martin Izye.

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(No Model.)

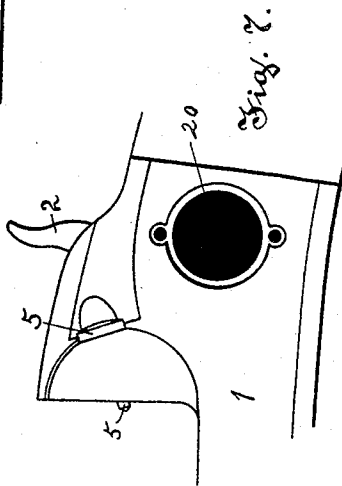
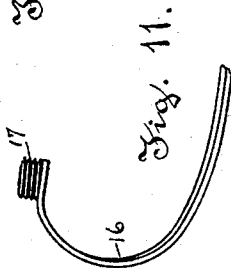
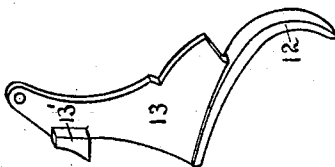
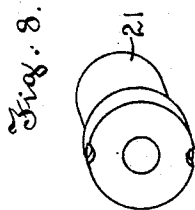
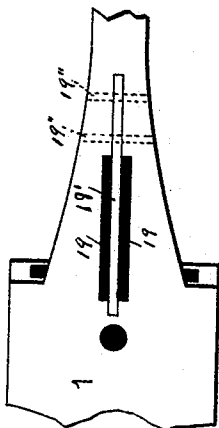
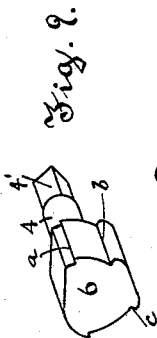
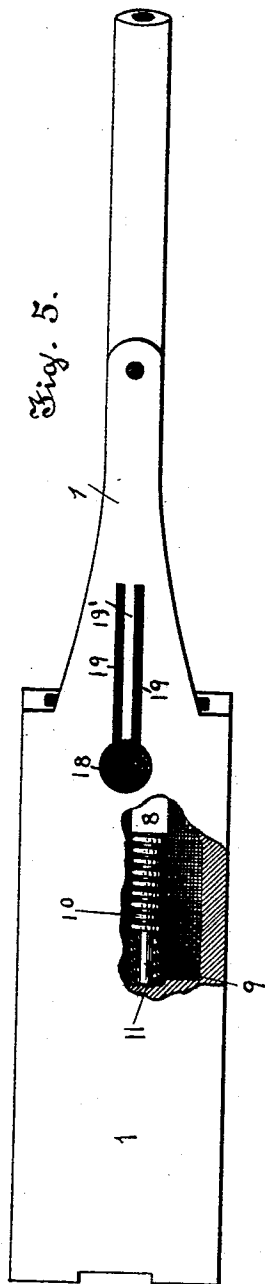
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UNITED STATES PATENT OFFICE.

MARTIN BYE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE FORE-HAND ARMS COMPANY, OF SAME PLACE.

GUN-FRAME FOR DROP-DOWN FIREARMS.

SPECIFICATION forming part of Letters Patent No. 582,776, dated May 18, 1897.

Application filed August 1, 1896. Serial No. 601,311. (No model.)

To all whom it may concern:

Be it known that I, MARTIN BYE, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Guns, of which the following is a specification.

My invention relates to guns, and more particularly to a gun-frame and the cocking and firing mechanism of an external-hammer gun; and the object of my invention is to improve upon the construction of the frame and of some of the parts of the cocking and firing mechanism; and my invention consists in certain novel features of construction of the frame and of the several parts of the cocking and firing mechanism, as will be hereinafter fully described.

Referring to the drawings, Figure 1 is a side view of the gun-frame of a double-barrel gun embodying my improvements. The lower part of the hammer is broken away. Fig. 2 is a section on line 2 2, Fig. 1, looking in the direction of arrow *a*, same figure. Fig. 3 is a side view corresponding to Fig. 1, but the frame is partially broken away to show the interior construction. Fig. 4 corresponds to Fig. 3, but shows the gun cocked. Fig. 5 shows the under side of the frame with the trigger-guard removed and a portion of the frame broken out. Fig. 6 shows a modified construction of the bottom of the frame. Fig. 7 shows a modified construction of the side of the frame. Fig. 8 shows the bushing which is adapted to fit into and close the opening in the side of the frame shown in Fig. 7. Fig. 9 shows the tumbler and its shaft detached. Fig. 10 shows a perspective view of the trigger and sear detached, and Fig. 11 shows one end of the trigger-guard detached.

I have shown in the drawings my improvements adapted for a double-barrel gun, and as the parts of the cocking and firing mechanism are duplicates a description of one set of parts will answer for both.

In the accompanying drawings, 1 is the frame of the gun, which is made of metal and of the usual shape used in double-barrel guns. To the front end of the frame 1 is pivoted the barrel portion (not shown) in the usual way.

The external hammer 2 is secured at one side of the frame on the non-circular end 4' of the tumbler-shaft 4 by a screw 3, and said hammer 2 strikes against a firing-pin 5, which may be of the usual construction and operation.

The tumbler 6 is made integral with the shaft 4, which has a bearing in the screw-threaded bushing 7, provided with a slotted head. (See Fig. 1.) Said bushing 7 is adapted to screw into a screw-threaded hole in the side of the frame 1 and to be covered by the hammer 2. (See dotted lines, Fig. 1.) The tumbler 6 is preferably made of the shape shown in the drawings with a notch *a* on its rear edge to be engaged by the sear when the tumbler is cocked and a second notch *b*, to be engaged by the sear after the gun is fired, and a third notch *c*, to be engaged by the projecting end 8' on the head 8 of the tumbler-follower or guide-pin 9. A spring 10 encircles the guide-pin 9, and the front end of said spring and of said pin extends in a circular recess 11 made in the frame, (see Fig. 5,) which holds said spring and also the pin 9 in proper position and makes a stop against which the pin 9 strikes when the tumbler is in cocked position, so that there can be no further movement of the tumbler or any lost motion or play of the hammer.

The trigger 12 and sear 13 are preferably made integral or in one piece and hung or pivoted on a transverse pin 14 in the upper part of the frame. The sear 13 is provided with a side extension 13', which engages with the rear edge of the tumbler 6.

A flat or leaf spring 15 is secured at its rear end in the rear of the frame and is adapted to bear at its front end on the rear portion of the trigger and acts to hold the sear in engagement with the tumbler and also acts as a stop to limit the rearward motion of the trigger and sear in the operation of firing the gun, the end of said spring engaging with a notch 12' in the upper side of the trigger at a point considerably below the pivot-pin 14, so as to block the rearward motion of the trigger and sear. The trigger-guard 16 is secured to the under side of the frame, and I prefer to provide one end of the trigger-guard with a screw 17, larger than the ordinary at-

taching-screw, which is adapted to screw into a hole 18 in the under side of the frame. (See Fig. 5.)

Extending rearwardly from the hole 18 are two slots 19, and in assembling the parts of the mechanism the extension 13' on each sear 13 is passed through the hole 18 and then the sear hung in place, with the trigger extending through one of the slots 19. Instead of making the hole 18 large enough to pass the side extension 13' on the sear 13 through I may cut out that portion 19' of the frame between the two slots 19 (shown in Fig. 5) to form a wider opening to allow the side extensions 13' on the sears 13 to pass through into the frame and then secure the part cut out in place by two transverse pins 19'' to form a division between the two triggers to hold them in their proper position, as shown in Fig. 6.

In assembling the tumblers in position the tumbler is inserted in place through the opening at the rear of the frame, and the tumbler-shaft is inserted through the opening in the side of the frame, and then the bushing 7 is screwed into the opening in the side of the frame and the hammer 2 attached to the tumbler-shaft by the screw 3, as above described.

If preferred, the opening 20 in the side of the frame may be large enough, as shown in Fig. 7, to allow the tumbler 6 to be passed through from the outside of the frame and then the bushing 21 (shown in Fig. 8) be secured in said opening by screws or otherwise and the trigger attached in the same manner, as above described.

The advantages of my improvements will be readily appreciated by those skilled in the art.

I provide a gun of very simple construction and operation, and I arrange for assembling the several parts of the cocking and firing mechanism within the frame in a very simple and expeditious manner without changing the general appearance of the frame.

By means of the recess at the front end of the frame, into which the spring encircling the guide-pin and the end of the pin extend, I am enabled to hold the spring and pin in proper position and also form a stop to limit the longitudinal motion of the pin and the rocking motion of the tumbler, so that when the tumbler is cocked it will be held, and any

backlash of the hammer will be prevented. By means of the trigger-spring arranged at the rear of the trigger within the frame I form a stop and limit the rearward motion of the trigger. By means of the opening in the bottom of the frame I can pass the sears, having the side extensions thereon, in through the bottom of the frame, and by having the opening at the side of the frame I can pass the tumblers through the side of the frame in assembling them in place within the frame.

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

1. In a gun, the combination with the frame, having a recess, 11, therein to receive the front end of the tumbler-follower, or guide-pin, and act as a stop against which said pin strikes when the tumbler is in cocked position, to prevent any further backward movement of the tumbler, and any backlash of the hammer, of said tumbler-follower, or guide-pin, and its actuating-spring, substantially as shown and described.

2. The combination with a gun-frame, having a screw-threaded hole through the lower part thereof, directly in front of and connected with and forming a part of a slot or slots, through which the trigger or triggers extend, of a trigger-guard, provided at one end with a screw to screw into said opening, substantially as shown and described.

3. The combination with a gun-frame, having a slot through the lower part thereof, wide enough to admit the side extension on the sear, of a removable dividing-strip adapted to be secured to the frame, to divide said slot into two parts, substantially as described.

4. In a gun, the combination with the frame, having an opening in the side thereof, of a bushing adapted to fit into said opening, and be secured therein, and act as a bearing for the tumbler-shaft, and said tumbler-shaft, having the tumbler made integral therewith, and an external hammer secured on the end thereof, and extending over and covering said bushing, substantially as shown and described.

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Witnesses:

J. C. DEWEY,
M. J. GALVIN.