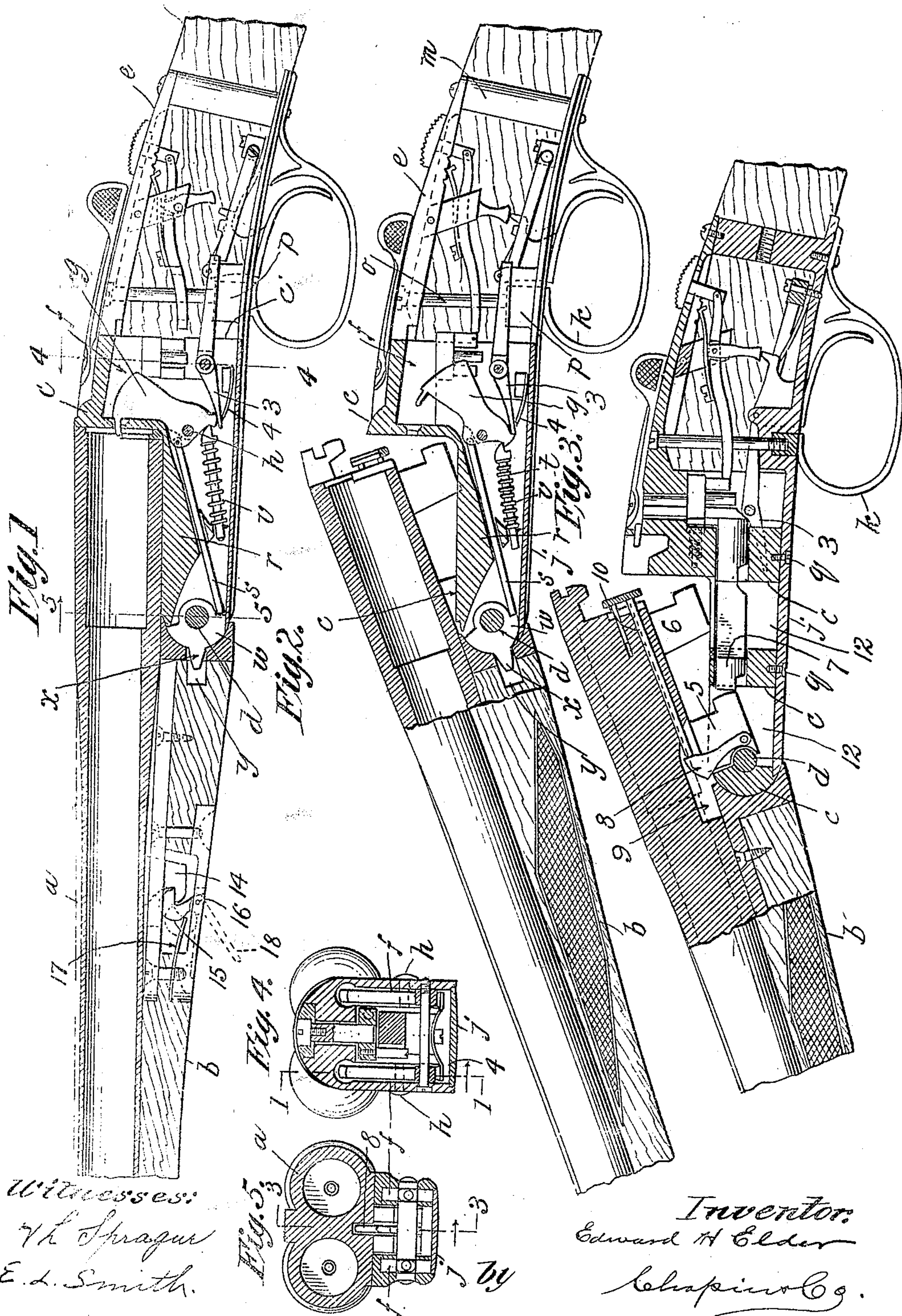


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E. H. ELDER.
DOUBLE BARRELED FIREARM.
APPLICATION FILED MAR. 16, 1906.



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UNITED STATES PATENT OFFICE.

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DOUBLE-BARRELED FIREARM.

No. 847,659.

Specification of Letters Patent.

Patented March 19, 1907.

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To all whom it may concern:

Be it known that I, EDWARD H. ELDER, a citizen of the United States of America, residing at Chicopee Falls, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Double-Barreled Firearms, of which the following is a specification.

This invention relates to firearms, and has particular reference to the construction of a double-barreled shotgun, the object of the invention being to provide a frame construction which is adapted to be manufactured to a considerable degree by forging and which is constructed to receive the mechanism of the arm in such position and arrangement as will permit the reduction in weight of this frame part to a very considerable degree; and other objects of the invention reside in certain novelties of construction incidental to the peculiar construction of the frame, all of which will be duly described in the following specification and pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section taken in the plane of line 1 1, Fig. 4, through one of the barrels of a double-barreled gun, the latter being in closed position. Fig. 2 is a view similar to Fig. 1 with the barrels broken down. Fig. 3 is a longitudinal section taken in a plane midway between the barrels, the plane of this section being shown by line 3 3, Fig. 5, and the barrels being broken down. Fig. 4 is a cross-section on line 4 4, Fig. 1; and Fig. 5 is a like section on line 5 5, Fig. 1, the pivot-pin of the barrels and the cams thereon being in full lines.

Referring to these drawings, *a* indicates the barrels; *b*, the fore-end of the stock; *c*, the frame, and *d* the pin on which the barrel pivots.

In the drawings the gun shown is provided with a top lever-locking action, and all of the parts of the lock mechanism and safety device are shown; but the invention has nothing to do with these parts, but resides, as stated, in the frame construction and in the arrangement of the means for actuating the hammer disposed in the frame alongside of and beneath each barrel particularly. Any bolt mechanism for the barrels may be used, and any suitable mechanism, other than that

shown for releasing the hammers, may be shown, and the arm may be made with or without the safety-latch shown herein, or another may be substituted therefor. The frame *c* is forged in one solid piece extending from the forward end thereof, in which the pivot-pin *d* is supported, to the point indicated by the line *c'*, Fig. 1, and from the upper end of the frame the tang *e* extends rearwardly, as usual.

Extending from one end of the body of the frame to the other and close to each side thereof a slot *f* is milled in the plane of the axis of each barrel, as shown clearly in the various figures, but whose location is perhaps best shown in Figs. 4 and 5. As shown in Figs. 1 and 2, these slots *f* extend upwardly into the rear end of the frame to provide space in which the hammers *g* may swing, these being supported on pins *h*, extending through the sides of the frame, the nose of the hammer reaching the primer of the cartridge, as usual, through a hole drilled in the recoil-plate back of which these slots *f* lie. The under side of the frame is finished by securing thereagainst the plate *j*, on which the trigger-guard *k* is secured, there being a post *m* on said plate *j*, extending therefrom up to the rear end of the tang *e*, and the trigger-guard being secured by a screw *o*, passing down through the tang and into a boss *b* on the guard in the well-known manner, two other screws *q* being used forward of the trigger-guard to screw the plate to the frame.

A peculiar feature of the frame lies in so making the milling-cuts therein, whereby the slots *f* are provided, as to leave a solid portion *r* of the frame in each of the slots *f* about midway between the hammer and the pivot-pin *d* for the barrels, this solid portion *r* serving as a support or bearing for the cocking-pin *s* and for the pin *t*, on which the main-spring *v* is supported, holes being drilled through said portion *r*, as shown in Figs. 1 and 2, to receive these parts. This construction not only provides serviceable and cheaply-made bearings for these parts, but also affords efficient supports for the thin sides of the frame which constitute the outer walls of the slots *f*.

On the pivot-pin *d* of the barrel and located in the forward end of the slots *f* there is mounted a cam *w*, whose outer border coin-

cides with the contour of the forward end of the frame, save for a projection x , which extends beyond the frame into a slot y in the rear end of the fore-end b , whereby when the
 5 barrels are broken down this cam w will be rotated and the shoulder thereon against which the cocking-pin s bears will be moved in the direction of the hammer, and thus throw the latter back to cocking position
 10 against the resistance of the mainspring v , the sear 3 snapping into the full-cock notch on the hammer, as shown in Fig. 2, 4 being the spring which actuates the sear. This sear-spring 4 is clearly shown in Figs. 1, 2, and
 15 4, and it consists of a plate extending transversely of the frame and having a finger extending forwardly therefrom under each sear, as shown.

When the gun is closed, the engagement of
 20 the projection x on the cam w withdraws the shoulder of the latter against which the end of the cocking-pin bears, whereby when the hammer falls the end of said pin will be re-located close to the shoulder, the opposite end
 25 of the pin being secured to the hammer, as shown. The barrels are provided with two lugs 5 and 6, with which a locking-bolt 7 may engage in the usual manner, and the lug 5 is longitudinally slotted, as shown in Fig. 5
 30 particularly. There is supported in said slotted portion of the lug 5 an extractor-arm 8, which is pivoted to the lug close to the pin d and extends upward between the barrels into a slot 9, into which slot the stem 10 of
 35 the extractor extends, the end of said stem lying in contact with the upper end of the arm 8. As the barrels are broken down the upper end of this arm will be swung against the forward end of the frame, as shown in Fig.
 40 3, and thereby force the extractor-stem outward, as shown, the closing movement of the barrel moving the extractor-stem inward again by the contact thereof with the recoil-plate. The forwardly-extending portion of
 45 the frame is broached out, as at 12 12, to receive the two barrel-lugs 5 and 6.

From the foregoing description it is clear that the location of the cocking-pin s and the mainspring v and its supporting-spring in
 50 the slots f on the sides of the frame, forwardly of the recoil-plate, results in a very considerable economy of space, permitting the shortening, and therefore the lightening, of the frame c , which is still further lightened
 55 by milling the slots f therein to receive these parts referred to, and, furthermore, this construction gives easy access to the frame in machining the same, as all the slots or cuts therein extend into the frame from one side,
 60 reducing the cost of the manufacture of the latter very appreciably, and at the same time this construction is not made at a sacrifice of appearances, for the bottom plate j , which is let into the under side of the frame,
 65 as shown in Figs. 4 and 5, flush with the lat-

ter, constitutes a practically invisible closing-plate. The latch for locking the fore-end to the barrels forms, however, no part of this invention and is not claimed herein. It consists in a hook-shaped lug 14 on the under
 70 side of the barrels and between the two, with which a hook 15 may engage, said hook being pivoted on a pin 16 in a plate let into the fore-end, a spring 17 being provided to en-
 75 gage the hook in such way as to hold the latter in engagement with the lug when in position. The handle end 18 of the hook swings up into a slot in the plate in which it is pivoted in a way to leave it flush with the
 80 fore-end.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a firearm of the character described, a frame having parallel recesses extending
 85 from the under side thereof near each side of the frame into and from end to end of the latter in the plane of the axes of the barrels, said recesses being bridged transversely be-
 90 tween the opposite ends thereof by the metal of the frame; a hammer, a mainspring, and a cocking-pin located in each of said recesses, the bridged portions of the latter constitut-
 95 ing supports for the longitudinal movement of the cocking-pins and the mainsprings.

2. In a firearm of the character described, a frame, barrels pivotally supported in the
 100 forward end of the latter, and a transversely-located pin in the frame on which the barrels may swing, the frame having parallel re-
 105 cesses extending from the under side thereof near each side of the frame into and from end to end of the latter in the plane of the axes of the barrels; a hammer, a mainspring, and a
 110 cocking-pin located in each of said recesses, a cam freely rotatable on the pivot-pin of the barrels and located in the forward end of each recess to engage said cocking-pins, there being a projection on said cams extending
 115 forwardly of the axis on which the barrels swing and engaging the latter, and a bridge-piece between said parallel recesses, a cock-
 120 ing-pin and mainspring supported by said bridge-piece.

3. In a firearm of the character described,
 115 a frame, barrels pivotally supported in the forward end thereof on an axis at right angles to the barrels, said frame having parallel re-
 120 cesses extending from the under side thereof into the frame, near each side of the latter, a hammer, a mainspring, and a cocking-pin located in each of said recesses, and a cam in the forward end of each recess supported on the axis on which the barrels swing and pro-
 125 vided with a shoulder against which said cocking-pins bear, there being a forwardly-extending projection on the cam to engage the barrels, and a plate to cover the under side of the frame, a bridge-piece between
 130 said recesses, two openings therethrough,

and said cocking-pin extending through said bridge-piece.

4. In a firearm of the character described, a frame, barrels pivotally supported in the forward end of the latter, and a transversely-located pin in the frame on which the barrels may swing, a frame provided with parallel recesses extending into the frame from the under side thereof and from end to end thereof, a hammer, a mainspring, and a cocking-pin located in each of said recesses, a cam freely rotatable on the pivot-pin of the barrels and located in the forward end of each

recess to engage the cocking-pins, there being a projection on said cams extending into a recess in said fore-end, a bridge-piece integral with the frame between said recesses and having two openings therethrough, one of said openings supporting said cocking-pin and the other the mainspring for operating the hammer.

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