

(No Model.)

H. A. A. THORN.
SINGLE TRIGGER MECHANISM FOR GUNS.

No. 602,610.

Patented Apr. 19, 1898.

Fig. 1.

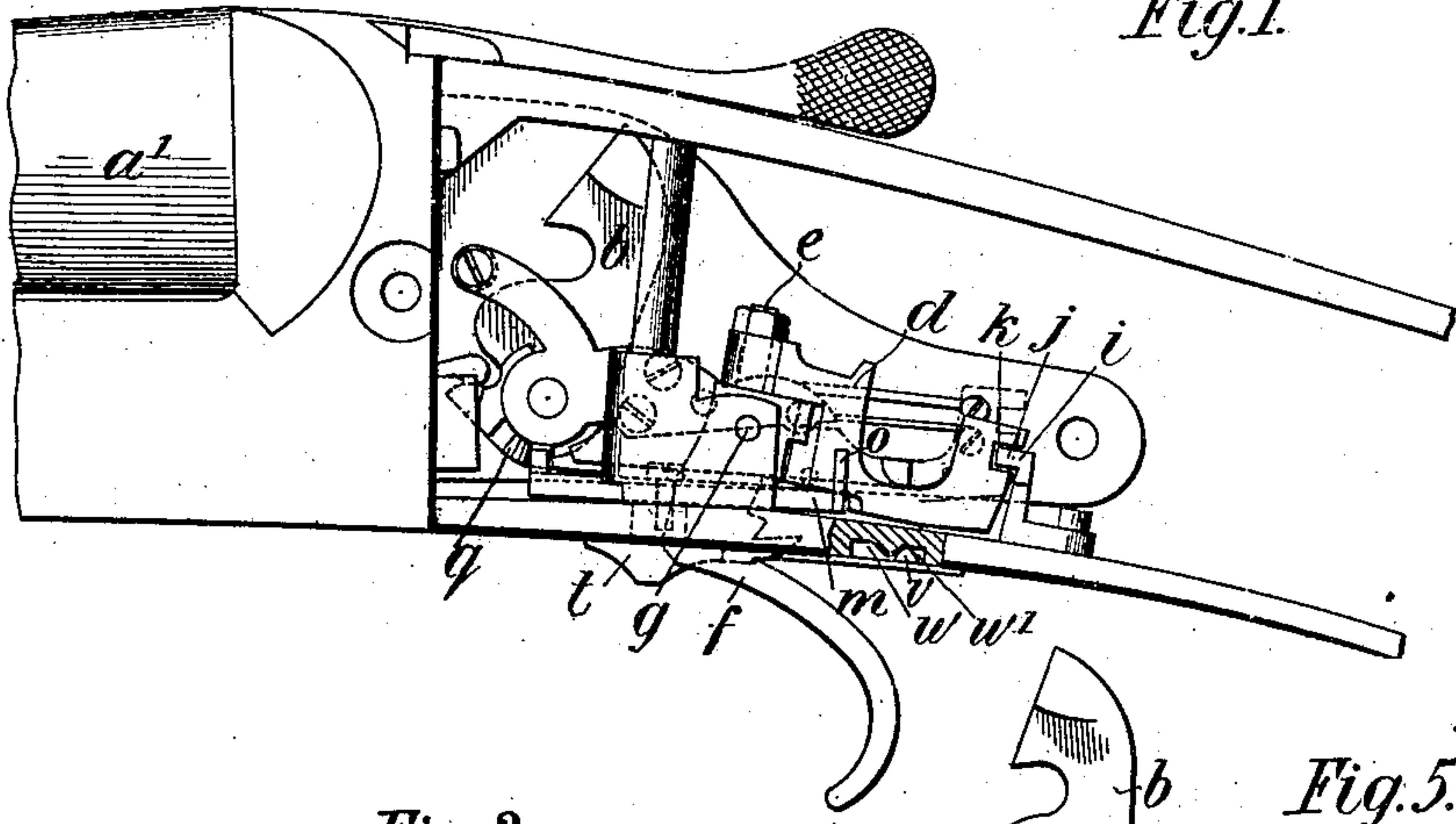


Fig. 2.

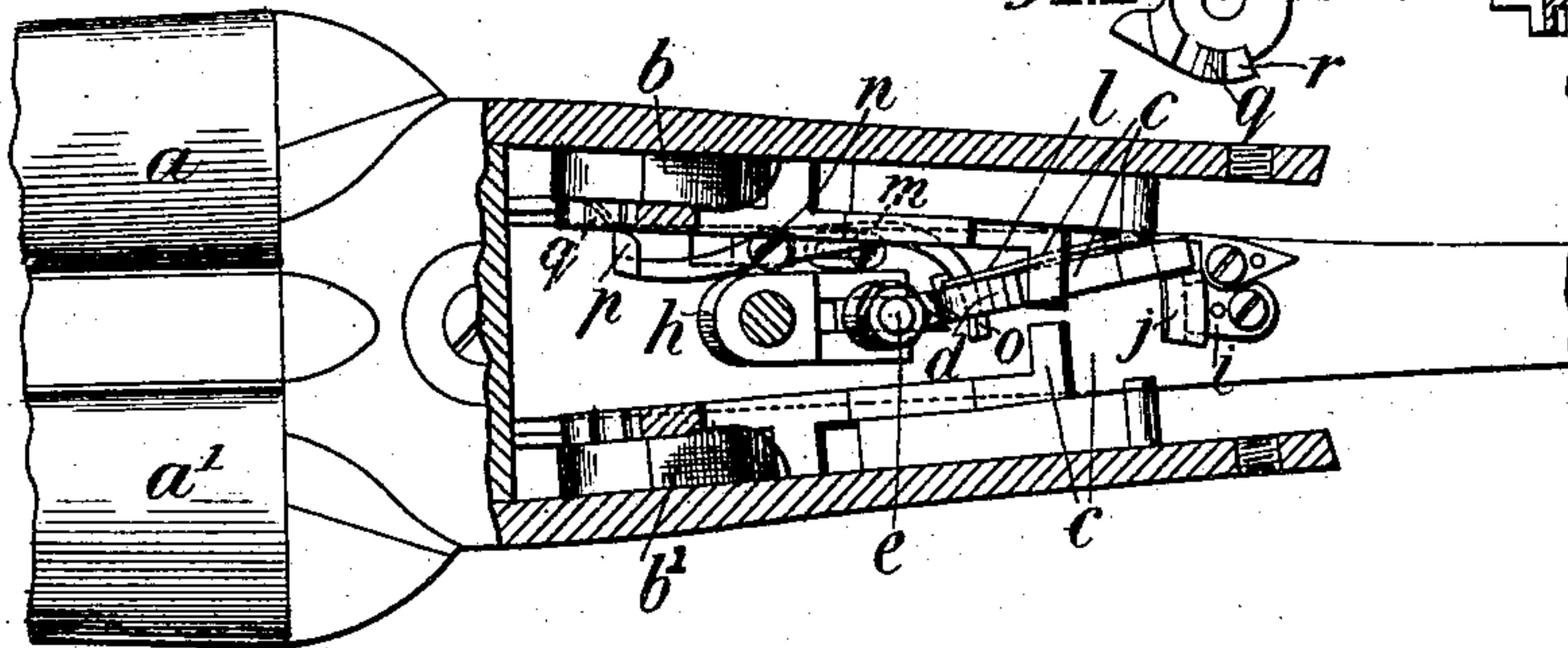


Fig. 4.

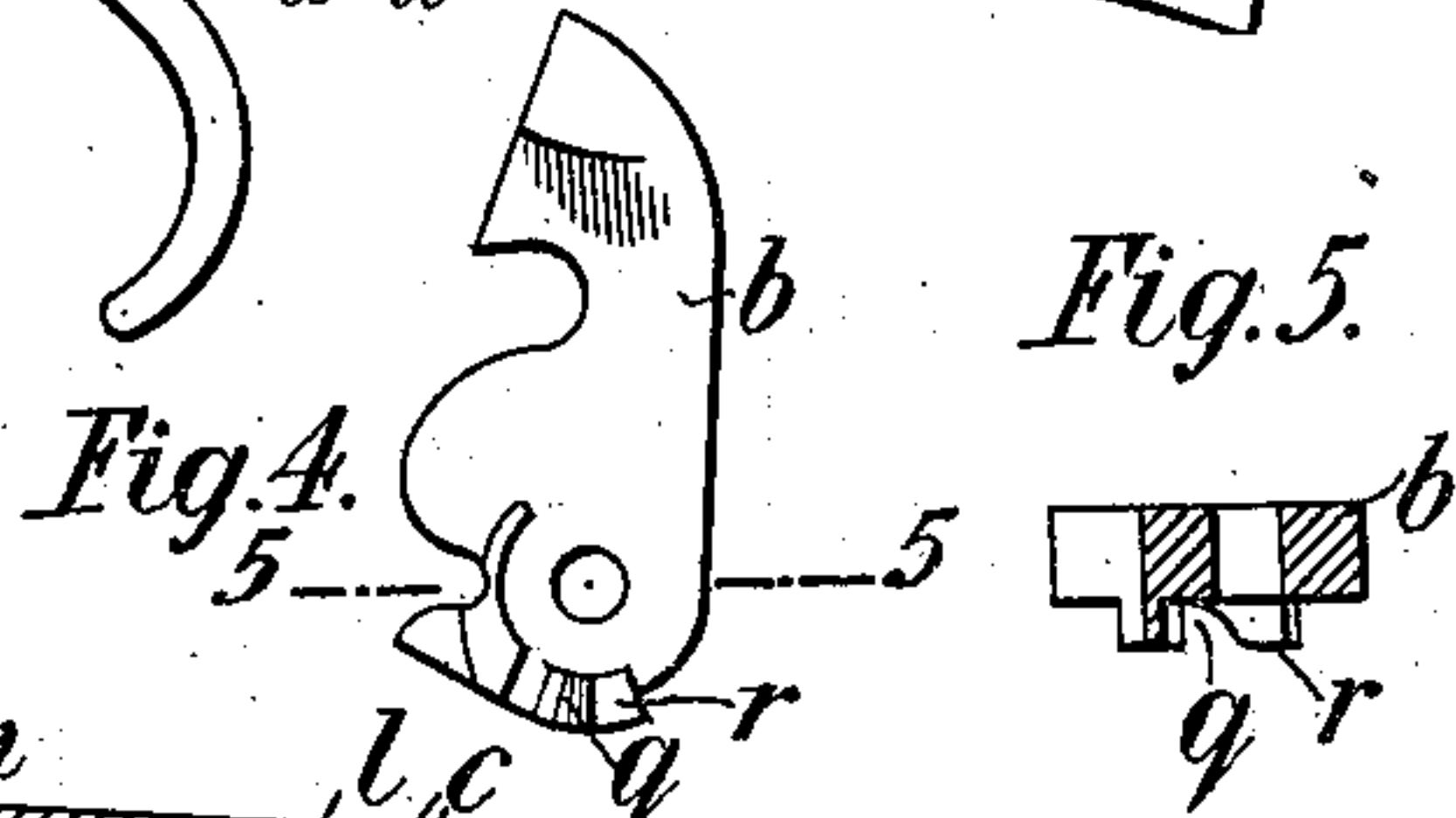


Fig. 5.

Fig. 3.

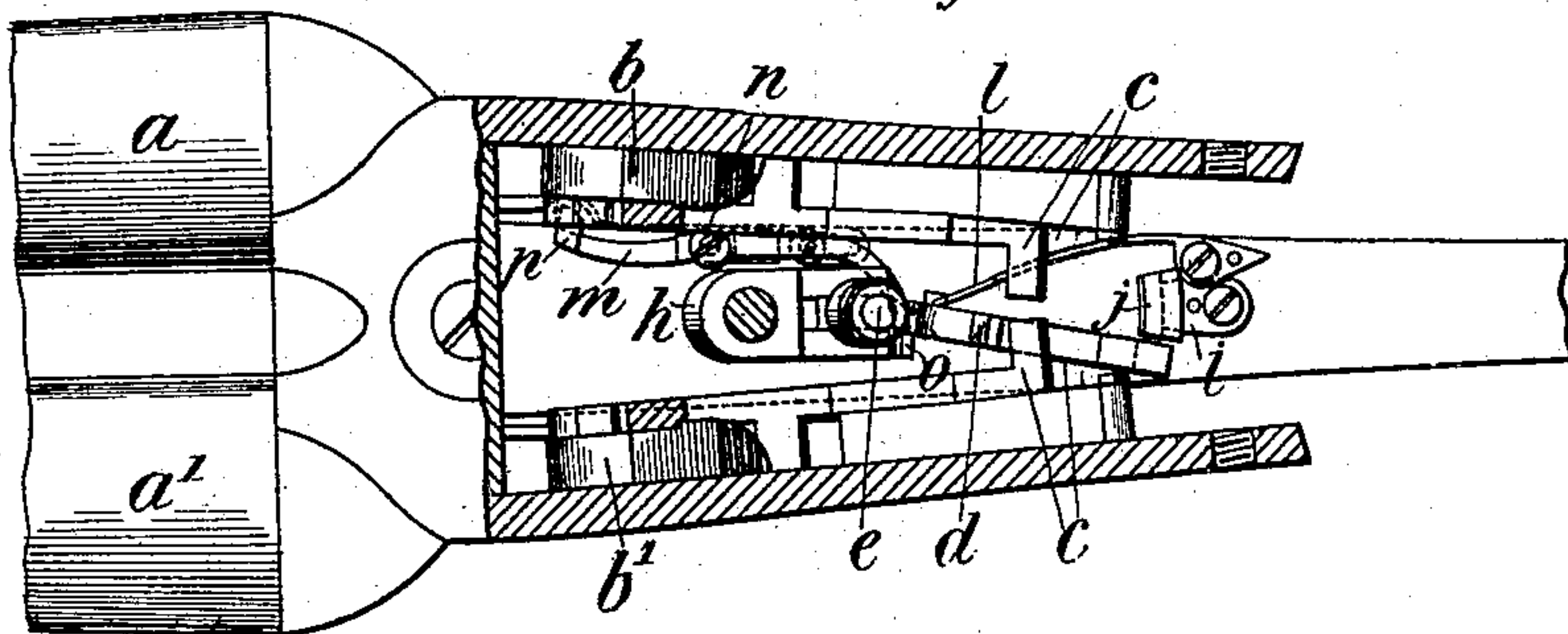


Fig. 6.



Fig. 7.

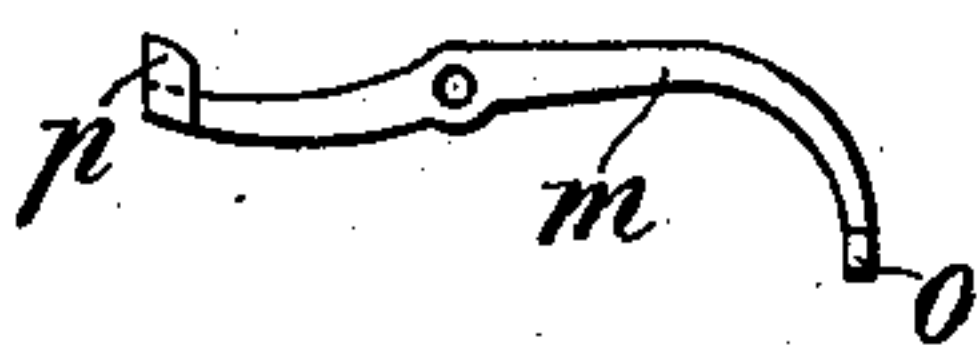


Fig. 8.

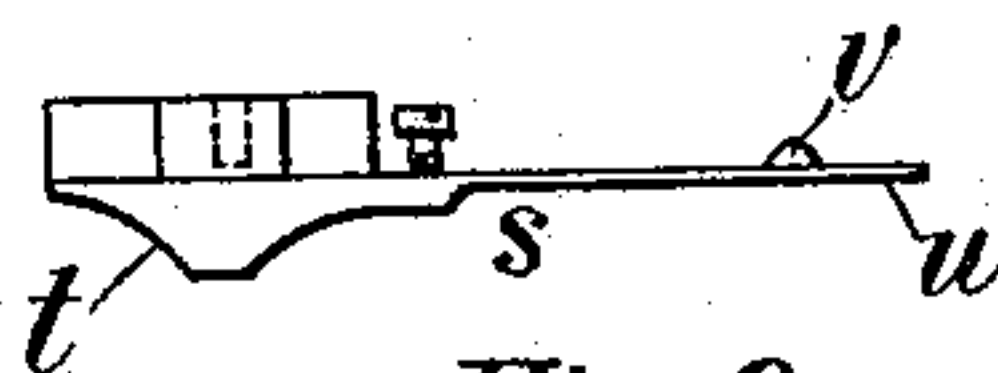


Fig. 9.

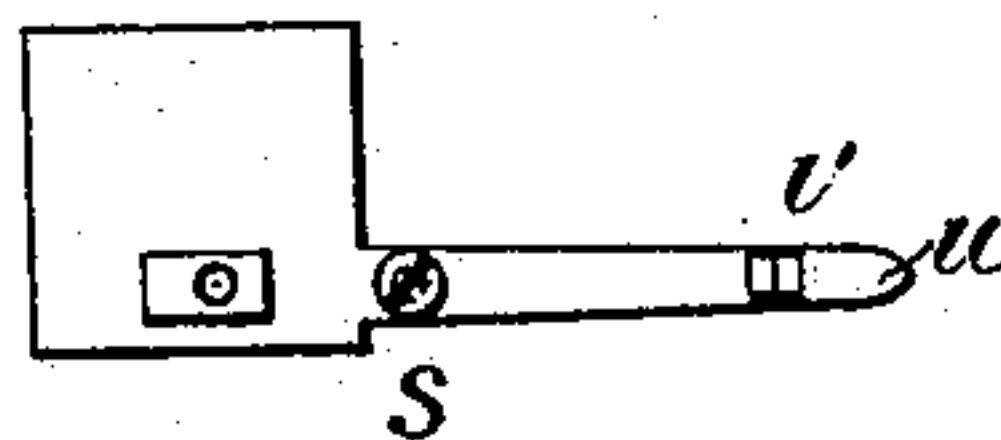
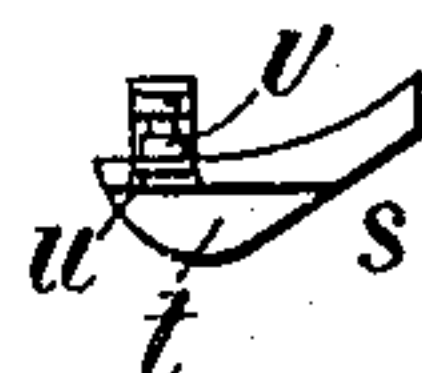


Fig. 10.



Witnesses.

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HENRY ALFRED ALEXANDER THORN, OF LONDON, ENGLAND.

SINGLE-TRIGGER MECHANISM FOR GUNS.

SPECIFICATION forming part of Letters Patent No. 602,610, dated April 19, 1898.

Application filed August 5, 1895. Serial No. 558,256. (No model.) Patented in England March 15, 1895, No. 5,517.

To all whom it may concern:

Be it known that I, HENRY ALFRED ALEXANDER THORN, a subject of the Queen of Great Britain, residing at London, England, have
5 invented new and useful Improvements in Single-Trigger Guns, (for which Letters Patent have been granted to me in Great Britain March 15, 1895, No. 5,517,) of which the following is a specification.

10 This invention relates to improvements in the lock mechanism of single-trigger double-barreled guns.

The chief objection to the use of single-trigger double-barreled guns as heretofore
15 constructed has been the liability of accidentally discharging the second barrel on the firing of the first barrel, which accidental discharge is due to the recoil of the gun momentarily freeing the trigger from the pressure of
20 the finger and the rebound of the gun pushing the trigger against the finger, which naturally follows the trigger to a certain extent during the recoil. According to my invention I overcome these objections by employ-
25 ing a switching trigger-blade of novel construction arranged in conjunction with what I term a "time-stud" and by the employment of a lever operated by a cam-surface on one of the tumblers, the said lever being mounted
30 upon a slide, all as hereinafter described.

In the accompanying drawings, Figure 1 is an elevation of breech mechanism having my improvements applied thereto, one lock being removed. Fig. 2 is a sectional plan; and Fig.
35 3 is a view similar to Fig. 2, but showing the parts in different positions. Fig. 4 is an elevation of the right-hand tumbler of the gun detached; and Fig. 5 is a section on the line 5 5, Fig. 4. Figs. 6 and 7 are an elevation
40 and plan, respectively, of the lever operated by the tumbler; and Figs. 8, 9, and 10 are respectively a side elevation, a plan, and an end elevation of the slide upon which the said lever is mounted.

45 *a a'* indicate the right and left barrels, respectively, and *b b'* the respective tumblers for the same, each of which has arranged in conjunction with it a sear *c*.

50 *d* is my improved switching trigger-blade, which is pivotally mounted on a stud *e*, fixed to the trigger *f*, which is pivoted at *g* in a trigger-box *h*, the said trigger being arranged

to engage with either of the sears *c c* in the usual manner and having a broadened rear end.

55 *i* is my timing stud or stop arranged in combination with the switching trigger-blade, the said timing-stud having a lip or flange *j*, which projects into the path of the rear end of the switching trigger-blade and prevents the
60 movement of the same out of engagement with one of the sears and into engagement with the other except when the said switching trigger-blade is in its normal position, a slot *k* being
65 formed in the rear end of the said switching trigger-blade to allow the latter to pass the time-stop in this position. *l* is a spring which serves to move the said switching trigger-
70 blade from right to left when in its lowermost position and keeps the switching trigger-blade to the sears.

With this arrangement it will be understood that when the trigger is pulled the switching trigger-blade will be lifted—for instance, to
75 the position indicated by the dotted lines in Fig. 1—so that the slot *k* is moved out of alinement with the lip *j* of the time-stop, thereby preventing the said switching trigger-
blade from moving from right to left. When the gun is fired, the pressure of the finger on
80 the trigger will be relieved, thereby allowing the switching trigger-blade to move downward a certain extent; but as the finger will involuntarily follow the trigger as the gun re-
85 coils this downward movement of the switching trigger-blade will not be sufficient to bring the slot *k* opposite to the lip *j*, so that when on the rebound of the gun the trigger
is again pressed tightly against the finger the only effect will be to again raise the switch-
90 ing trigger-blade to the position indicated by the dotted lines. When after the first barrel has been fired the trigger is fully released, the slot *k* will come opposite to the lip *j*,
95 thereby allowing the switching trigger-blade to move over into engagement with the sear of the left-hand barrel ready for the next discharge.

100 *m* is the lever, by means of which the switching trigger-blade is moved out of engagement with the sear of the left-hand tumbler into engagement with the sear of the right-hand tumbler against the pressure of the spring *l*, the said lever being pivoted upon the screw

2 *n* and having at one end a finger *o*, which
 bears against the left-hand side of the switch-
 ing trigger-blade, and at the other end a cam
 projection *p*, which works in conjunction with
 5 a cam-recess *q*, formed on the tumbler *b*. So
 long as the tumbler of the right-hand barrel
 is in the cocked position (shown in Figs. 1 and
 2) the cam projection *p* will rest against the
 flat surface *r*, adjacent to the cam-recess *q*,
 10 as shown in the said figures, so that the finger
o retains the switching trigger-blade in its
 right-hand position against the pressure of
 the spring *l*. When, however, upon the dis-
 charge of the right-hand barrel the tumbler
 15 moves forward, the cam-recess *q* in the tum-
 bler moves opposite to the cam projection *p*,
 whereby the latter moves into the said cam-
 recess under the action of the spring *l*, as will
 be readily understood by reference to Fig. 3,
 20 which shows the position of the parts after
 the right-hand barrel has been discharged
 and the switching trigger-blade has moved
 over into engagement with the sear of the left-
 hand tumbler. When the tumbler *b* is again
 25 cocked, owing to the opening of the breech in
 the usual manner, the inclined surface of the
 cam-recess *q* by acting upon the cam projec-
 tion *p* will again move the lever to the posi-
 tion shown in Figs. 1 and 2, moving the switch-
 ing trigger-blade into engagement with the
 30 sear of the right-hand lock.

35 *s* is the slide to which the pivot *n* of the le-
 ver *m* is attached, as clearly shown in Figs.
 8 to 10, and by means of which the left-hand
 barrel may be discharged first or used con-
 tinuously, if desired. This slide is capable
 of moving a distance sufficient to move the
 cam projection *p* from the position shown in
 Fig. 2 (in which it bears upon the flat sur-
 40 face *r* of the tumbler) into the position shown
 in Fig. 3, (where it is opposite to the cam-re-
 cess *q*,) so that while the tumbler of the right-
 hand barrel remains cocked the switching-
 blade may be allowed to move over into en-
 45 gagement with the sear of the left-hand lock
 to fire the left-hand barrel without firing the
 right-hand barrel first. If it is desired to
 discharge the right-hand barrel, it is only
 necessary to move back the slide from the po-
 50 sition shown in Fig. 3 to that shown in Fig.
 2, which is the normal position.

The slide *s* is provided with a finger-piece
t and spring-blade *u*, the latter having a

projection *v* thereon designed to engage with
 either of the two notches *w w'*, Fig. 1, corre- 55
 sponding with the two positions of the slide.

Although I have shown and described my
 invention as applied to what is known as a
 "side" or "detachable" lock gun, it is obvious
 that it is equally applicable to what is known 60
 as a "body" or "box" lock gun by simply
 forming on the lever *m* a cam projection *p*,
 designed to be operated by the back of the
 tumbler instead of by a cam-recess therein.

It will also be obvious that my improve- 65
 ments may be arranged so that the left-hand
 barrel will be discharged first instead of the
 right, as hereinbefore described.

Having now particularly described and as- 70
 certain the nature of my said invention and
 in what manner the same is to be performed,
 I declare that what I claim is—

1. In a double-barreled firearm, the com-
 bination with the hammers each provided
 with a sear, of a single trigger, a switching 75
 trigger-blade pivotally connected with said
 trigger, a retaining device for holding said
 blade in operative relation with the sear of
 one hammer, having a part engaging the said
 hammer in its cocked position, a spring for 80
 forcing said blade into operative relation with
 the sear of the other hammer, when released
 by said retaining device, and a part located
 on the exterior of the lock and connected with
 said retaining device for withdrawing the 85
 same to allow the blade to shift, substantially
 as described.

2. In a double-barreled firearm the com-
 bination with the hammers, and a sear for
 each hammer, of a single trigger, a switching 90
 trigger-blade pivotally connected with said
 trigger and adapted to move transversely of
 the lock and said blade being provided with
 a slot, means for holding said blade normally
 in operative relation with the sear of one 95
 hammer, devices for moving said blade into
 operative relation with the sear of the other
 hammer, and the stationary time-stop located
 intermediate the two operative positions of
 said blade, and having a part in line with the 100
 slot in said blade, substantially as described.

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Witnesses:

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