

No. 867,685.

PATENTED OCT. 8, 1907.

T. M. THORSEN.
FIREARM.

APPLICATION FILED APR. 16, 1906.

FIG. I.

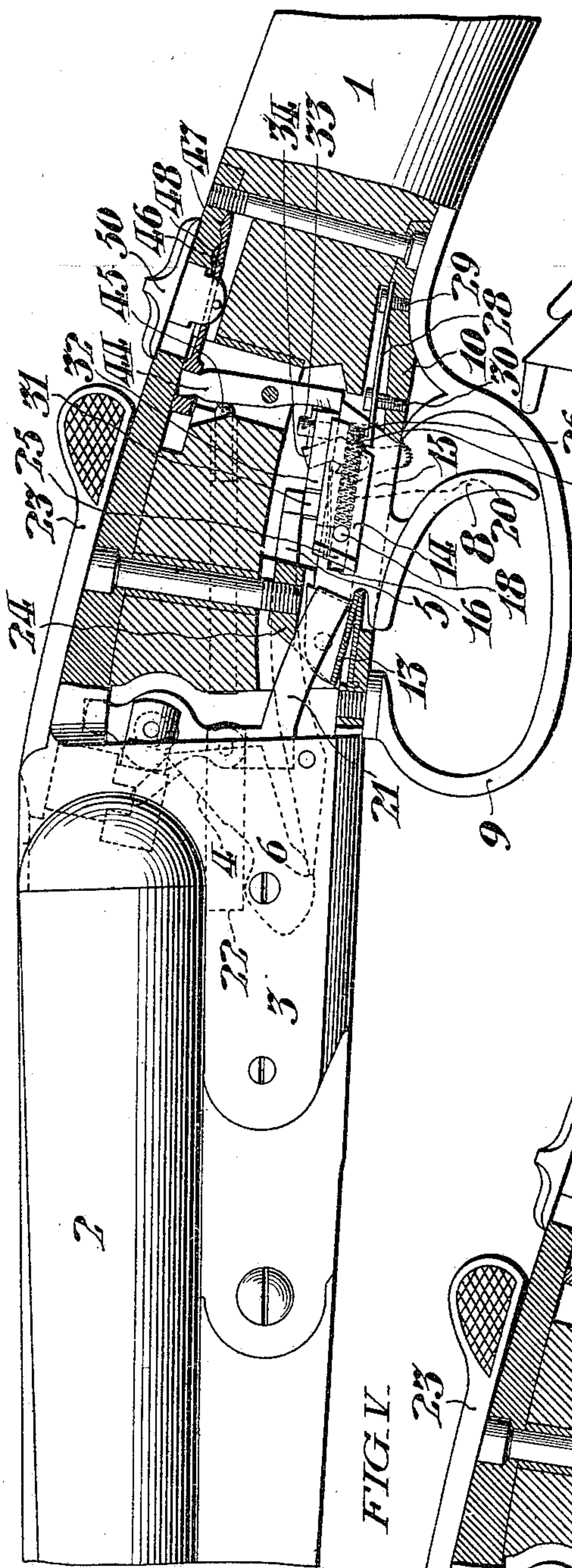


FIG. III.

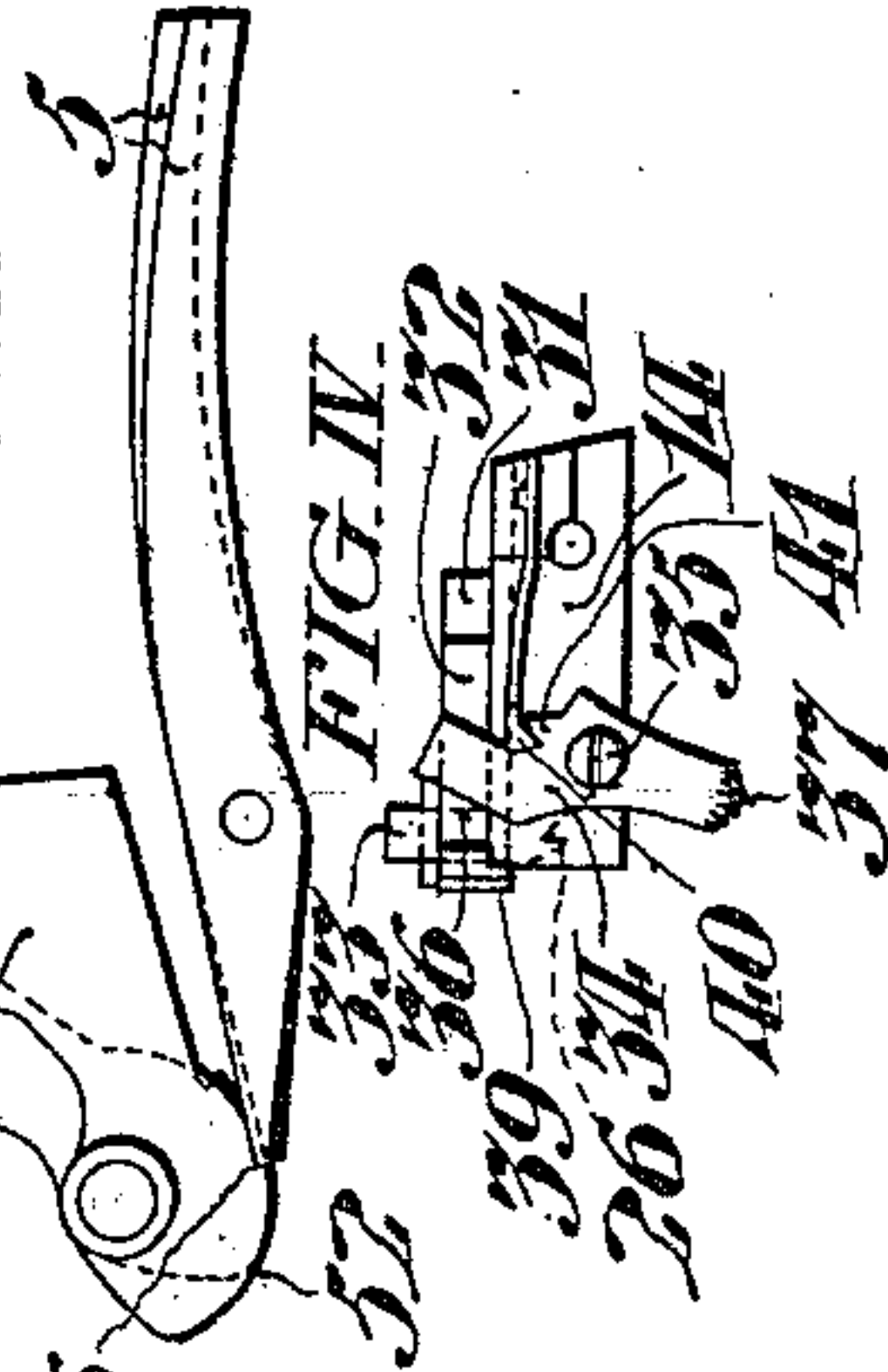


FIG. IV.



FIG. II.

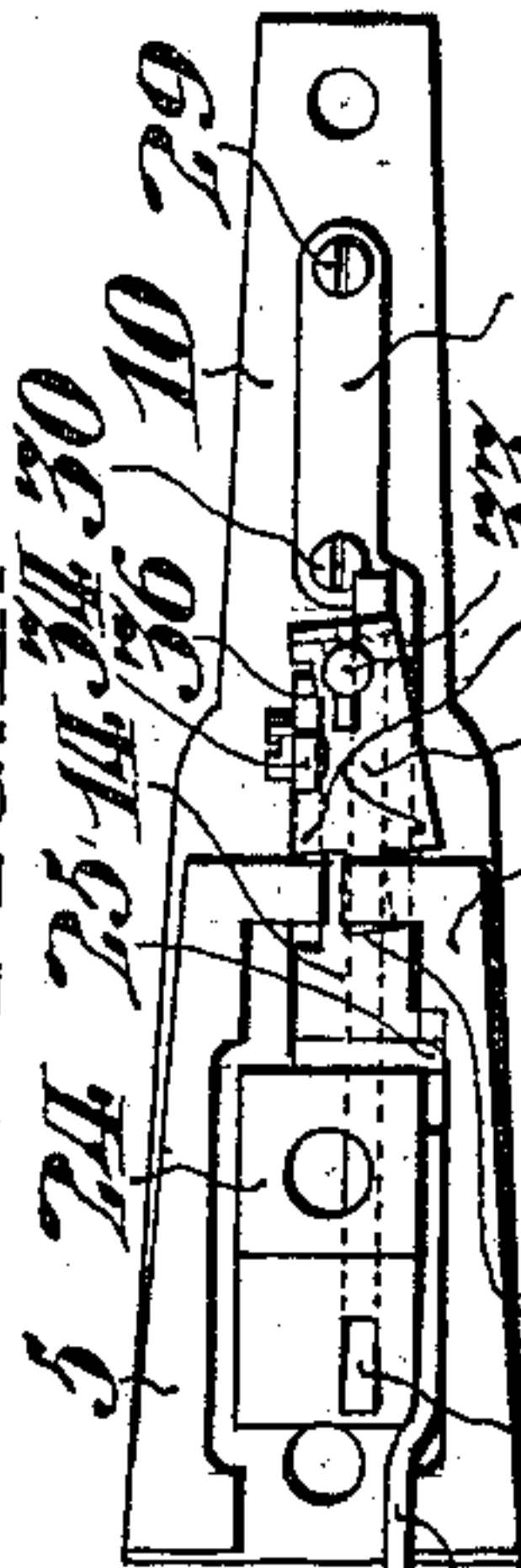


FIG. V.

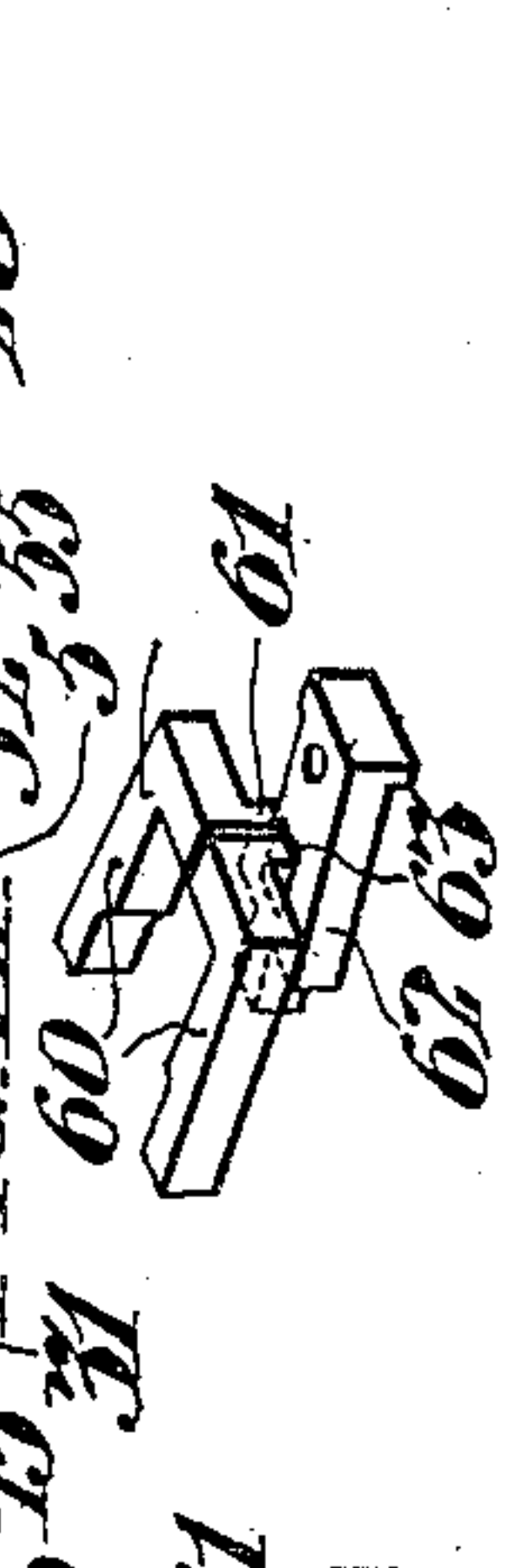


FIG. VI.

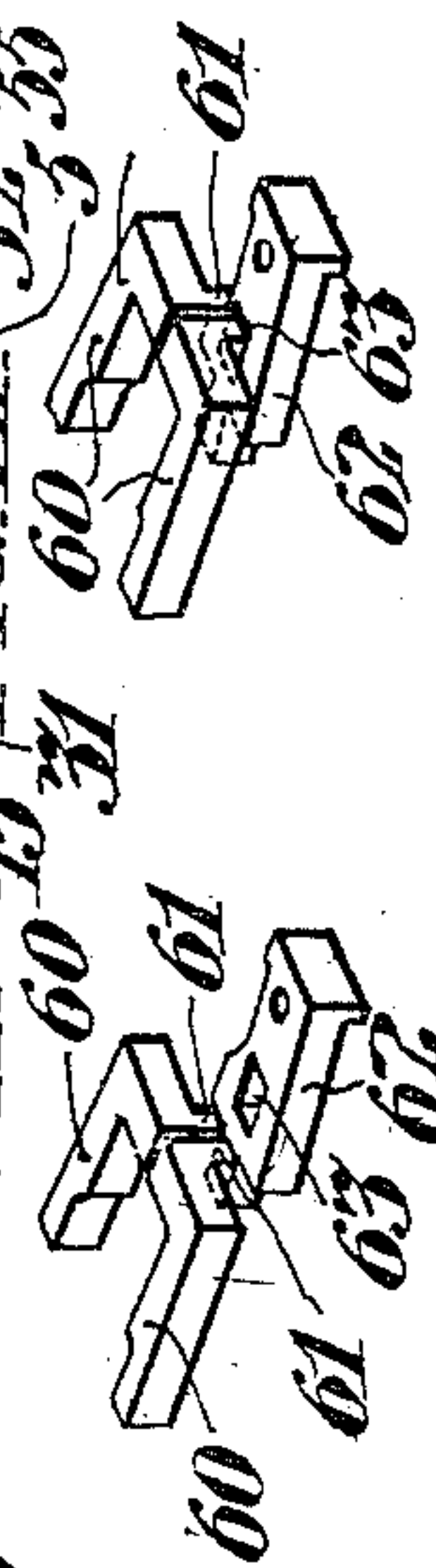


FIG. VII.

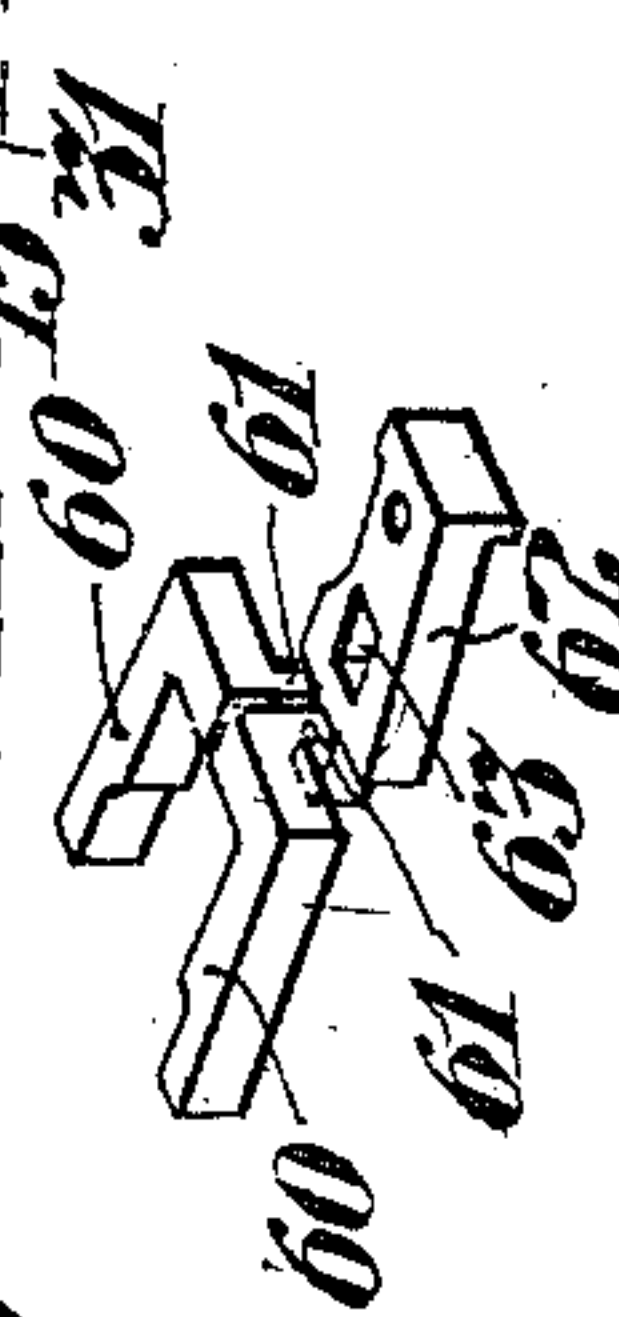
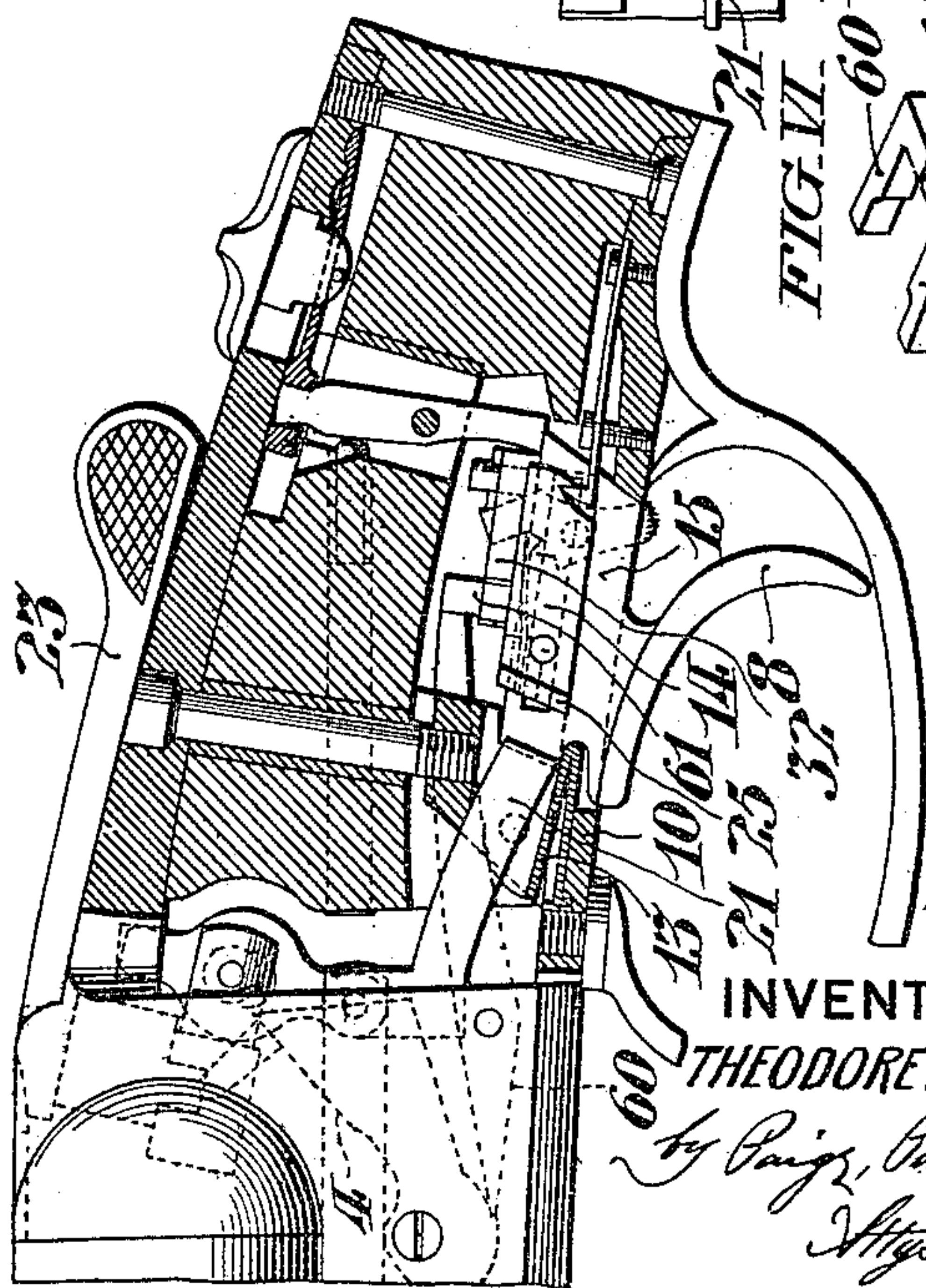


FIG. V.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THEODORE M. THORSEN, OF CAMDEN, NEW JERSEY.

FIREARM.

No. 867,685.

Specification of Letters Patent.

Patented Oct. 8, 1907.

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To all whom it may concern:

Be it known that I, THEODORE M. THORSEN, of Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Firearms, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to a double barreled breech loading gun having mechanism whereby a single trigger may be operated to selectively discharge either 10 barrel.

The form of my invention hereinafter described comprises a single trigger which carries a tripping plate capable of both a longitudinal reciprocatory movement and lateral oscillatory movement, and arranged to selectively engage either one or the other of the sears, in accordance with its positions when said trigger is operated.

My invention also comprises means whereby said plate is automatically shifted longitudinally when the 20 breech is opened, and so set that successive movements of the trigger effect the successive discharge of the barrels. However, means are also provided whereby the operator may manually set said plate to predetermine which barrel shall be first discharged.

My invention further comprises various novel features of construction and arrangement hereinafter more definitely described and claimed.

In the accompanying drawings, Figure I, is a side elevation of a gun, having a portion broken away to disclose my invention which it conveniently embodies. Fig. II, is a fragmentary plan view of the trigger mechanism, showing the sears extending in operative relation thereto. Fig. III, is a diagrammatic side elevation of the hammers and sears, in their fired and 35 cocked positions. Fig. IV, is a fragmentary side elevation looking from the right hand side of the gun, of the mechanism for selecting the barrel to be first discharged. Fig. V, is a view similar to Fig. I, but embodying a slight modification. Fig. VI, is a fragmentary perspective view of the sears, and their tripping plate as arranged in Fig. V. Fig. VII, is a view similar to Fig. VI, showing the tripping plate shifted forward.

In said drawing, the gun comprises the stock 1, barrels 2, and action 3, within which are mounted the 45 hammers 4, arranged to be operated by the sears 5, each of which engage the notch 6, in its respective hammer when cocked, and releases said hammer when its free end is uplifted, in the usual manner.

The trigger 8, is protected by the trigger guard 9, 50 and is pivoted in the trigger plate 10, being normally maintained in its inoperative position, by the spring 13. Said trigger 8, carries a slide block 14, saddled upon its upwardly extending web 15, which is provided with an elongated aperture 16, through which 55 the pin 18, in said block 14, extends.

As best shown in Fig. I, a coiled spring 20, is mounted

in the aperture 16, and is arranged to engage the pin 18, to normally shift the block 14, forward. Said block is arranged to be shifted rearwardly, against the tension of said spring at each loading of the gun, by the arm 21, 60 carried by the bolt 22, which is operated by the lever 23.

The arm 21, is shown in Fig. I, is in front of the plane of section, and as best seen in Fig. II, slides along the left side of the abutment 24, and is arranged to engage the flange 25, of the block 14, and shift said block rearwardly until its hook 26, engages the spring detent 27, the spring tail 28, of which is secured to the trigger plate 10, by the screw 29, and a set screw 30, is arranged to limit the upward movement of the detent, so that it may be set to engage the hook 26, with any degree of 70 purchase desired.

Upon the upper surface of the block 14, a tripping plate 32, is pivoted on the upright stud 33, and as best shown in Fig. II, said plate is keystone shaped, and its reduced projection 31, at its enlarged end is arranged 75 to extend beneath one or the other of the sears 5, according to its position, which, as best shown in Figs. II, and IV, is controlled by the lever 34, pivoted at 35, on the block 14. The upper end of said lever 34, is arranged to engage a cam recess 36, in the side of the 80 tripping plate 32, while its lower end projects through the trigger plate 10, and is provided with serrations 37, which may be engaged by the finger of the operator to shift the tripping plate 32, to such a position that when raised it will engage the sear to discharge first, the barrel which the operator may elect. 85

As best shown in Fig. IV, the tripping plate 32, is provided with a downwardly extending lip 39, arranged to limit its throw by the engagement of said lip with the rear end of the block 14, thus it will be 90 seen that by shifting the lever 34, into either of its two positions, and there detained by the spring detent 40, which may engage it on either side of the projection 41, the tripping plate 32, will be correspondingly shifted to insure its engagement with one or the other of the 95 sears 5, and by the engagement of the lip 39, with the block 14, said plate is prevented from further outward movement.

In connection with my invention I have shown in Fig. I, a safety device of well known construction, 100 which comprises a centrally pivoted lever 44, whose lower end is shifted over the trigger web 15, (at the time the gun is cocked), by the safety rod 45, which is shifted rearwardly by the bolt 22. The upper end of said lever is engaged by the spring detents 46, whose 105 rear end is so shaped as to engage either of the two recesses 47, 48, in the action casing, and whose central portion is connected with the safety slide 50, which extends through said casing, and is arranged to be shifted by the operator to release or engage the trigger as he 110 may desire.

As shown in Fig. III, the cam surfaces 52, of the

hammers 4, are concentric with their axes, so that when the sear 5, is uplifted to disengage the notch 6, and thereby release the hammer, its forward end slides upon said concentric cam surface, and its rear end is maintained in a slightly higher plane than when the hammer is cocked. However, in some makes of guns the cam surface above referred to, is so proportioned that the sears occupy a common plane regardless of the position of the hammers, so as may be seen it would be necessary to uplift both sears, with the tripping plate when discharging the second barrel. Therefore, as shown in Figs. V, to VII, I have provided the sear 60, of such a gun with depending projections 61, arranged to be engaged and uplifted by the tripping plate 62, which has the recess 63, so disposed therein that when said plate is uplifted when in its forward position, as shown in Fig. VII, to discharge the second barrel, the projection 61, of the sear first operated extends into said recess 63, and remains undisturbed.

When both barrels of the gun have been discharged and it is desired to recharge, the operator shifts the lever 23, to the right, which shifts the bolt 22, out of engagement with the barrels and permits the opening of the breech. The shifting of the bolt 22, carries the arm 21, rearwardly, which engages and shifts the block 14, to engage its hook 26, with the detent 27. Contemporaneously therewith, the bolt 22, engages the safety rod 45, which sets the safety lever 44, over the rear end of the trigger web 15, thereby preventing the accidental discharge of the gun. The operator then shifts the lever 34, to set the tripping plate 32, with its forward projection 31, under that sear 5, which is arranged to discharge the barrel, that he desires to be first discharged. He then shifts the safety device out of engagement with the trigger web 15, by shifting the safety slide 50, forward. Having thus set the gun in position to discharge first, the barrel which the operator so desires, the trigger may be pulled and the sear uplifted by the projection 31, on the plate 32. In pulling said trigger its rear end is uplifted, and the block 14, is thus disengaged from the detent 27, and is then shifted forward by the spring 20, until the corner 55, of said plate 32, is disposed beneath the sear of the remaining cocked hammer so that by again pulling the trigger said latter sear is uplifted by said corner 55, to discharge its barrel.

I do not desire to limit myself to the precise details of construction and arrangement herein set forth, as it is obvious that various modifications may be made therein, without departing from the essential features of my invention.

I claim:—

1. In a firearm comprising a plurality of barrels, the combination with a trigger; of a block mounted to reciprocate on said trigger; a spring tending to shift said block forward; a spring detent arranged to retain said block in its rearward position; means arranged to adjust said detent; means on said block whereby the first pulling of the trigger discharges one barrel and releases said block, and the subsequent pulling of said trigger discharges the remaining barrel, substantially as set forth.

2. In a firearm comprising a plurality of barrels, the combination with a trigger; of a block mounted to reciprocate on said trigger; means arranged to detain said block in different positions on said trigger; means arranged to adjust said detaining means; and means whereby the successive operations of said trigger, shifts said

block to successively discharge said barrels, substantially as set forth.

3. In a firearm comprising a plurality of barrels, the combination with a trigger; of a block mounted to reciprocate on said trigger; a spring tending to shift said block forward; a spring detent arranged to retain said block in its rearward position; means arranged to shift said block into engagement with said detent; means arranged to adjust said detent; adjustable mechanism on said block whereby successive operations of said trigger successively discharge said barrels; and adjustable means arranged to predetermine the order of succession of discharge of said barrels, substantially as set forth.

4. In a firearm comprising a plurality of barrels, the combination with a trigger; of a block mounted to reciprocate on said trigger; a spring tending to shift said block forward; a spring detent arranged to retain said block in its rearward position; means arranged to shift said block into engagement with said detent; means arranged to adjust said detent; adjustable mechanism on said block whereby successive operations of said trigger successively discharge said barrels; adjustable means arranged to predetermine the order of succession of discharge of said barrels; and, a safety device arranged to prevent the accidental discharge of said barrels, substantially as set forth.

5. In a firearm comprising a plurality of barrels, the combination with a trigger; of a block mounted to reciprocate on said trigger; a spring tending to shift said block forward; a spring detent arranged to retain said block in its rearward position; means arranged to shift said block into engagement with said detent; means arranged to adjust said detent; adjustable mechanism on said block whereby successive operations of said trigger successively discharge said barrels; adjustable means arranged to predetermine the order of succession of discharge of said barrels; and a safety device arranged to be automatically set to prevent the accidental discharge of the barrels, and to be manually shifted to permit the discharge of said barrels, substantially as set forth.

6. In a fire arm comprising a plurality of barrels, the combination with trigger mechanism; of adjustable mechanism carried by said trigger, arranged to selectively discharge said barrels a detent arranged for coöperative connection with said trigger mechanism; and, adjustable means arranged to vary the relation between said trigger mechanism and said detent, substantially as set forth.

7. In a fire arm comprising a plurality of barrels, the combination with a trigger; of adjustable mechanism carried by said trigger arranged to selectively discharge said barrels; a spring detent; and screw threaded adjustable means arranged to vary the relation between said adjustable mechanism and said detent, substantially as set forth.

8. In a fire arm comprising a plurality of barrels, the combination with a trigger; of adjustable mechanism carried by said trigger arranged to selectively discharge said barrels; a spring detent 28, arranged to engage said adjustable mechanism; a set screw 30, arranged to vary the relation between said adjustable mechanism and said detent, substantially as set forth.

9. In a fire arm comprising a plurality of barrels, the combination with sears arranged to coöperate with hammers to discharge respective barrels; of a trigger; an adjustable plate on said trigger, comprising a projection arranged to be shifted to selectively engage said sears; means arranged to normally shift said plate forward; an adjustable spring detent arranged to retain said plate in its rearward position; and means arranged to shift said plate irrespective of the position of the hammers to engage its projection with either one of said sears, whereby the first operation of the trigger shifts said sear, and automatically sets said plate to engage the other sear when the trigger is subsequently operated, substantially as set forth.

10. In a fire arm comprising a plurality of barrels, the combination with a bolt arranged to engage said barrels; of a trigger; a block mounted to reciprocate on said trigger; a spring tending to shift said block forward; an adjustable spring detent arranged to retain said block in its rearward position; means carried by said bolt arranged to

5 directly engage said block and shift it into engagement
with said detent; and, adjustable mechanism on said block
whereby successive operations of said trigger successively
discharge said barrels in alternation, substantially as set
forth.

10 11. In a fire arm comprising a plurality of barrels, the
combination with sears each having a depending projec-
tion, and arranged to coöperate with hammers to dis-
charge respective barrels; of a trigger carrying an adjust-
able plate, comprising a recess arranged to receive either

of said projections; and, means arranged to shift said
plate to predetermine the sequence in which said sears
are operated, substantially as set forth.

In testimony whereof, I have hereunto signed my name,
at Philadelphia, Pennsylvania, this 14th day of April 1906. 15

THEODORE M. THORSEN.

Witnesses:

ARTHUR E. PAIGE,
CLIFTON C. HALLOWELL.