

No. 822,808.

H. L. WOELTJEN.  
GUN.

PATENTED JUNE 5, 1906.

APPLICATION FILED SEPT. 29, 1905.

3 SHEETS—SHEET 1.

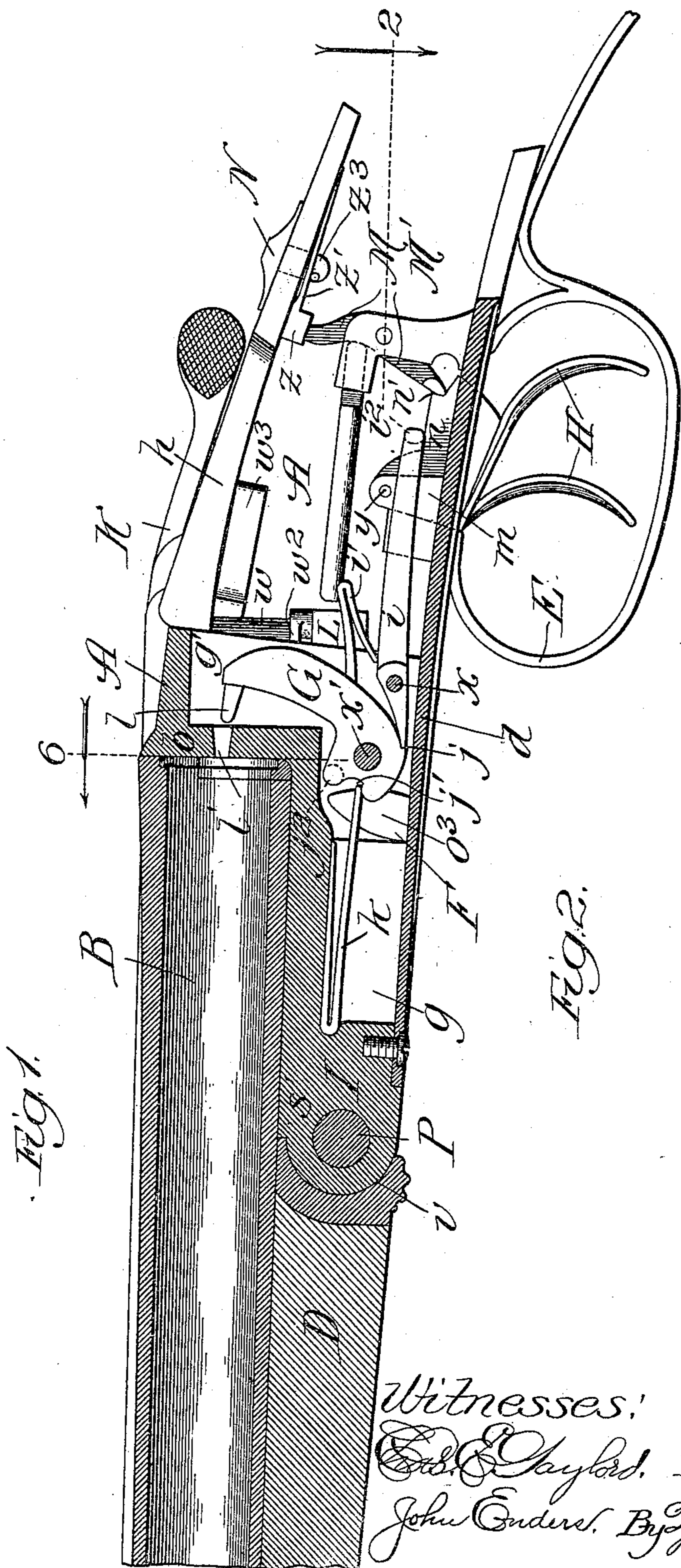
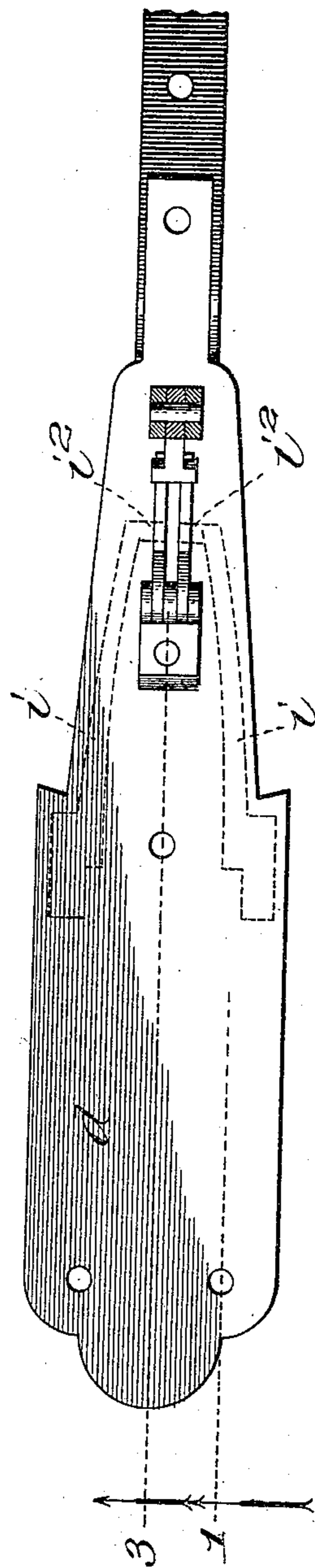


Fig. 2.



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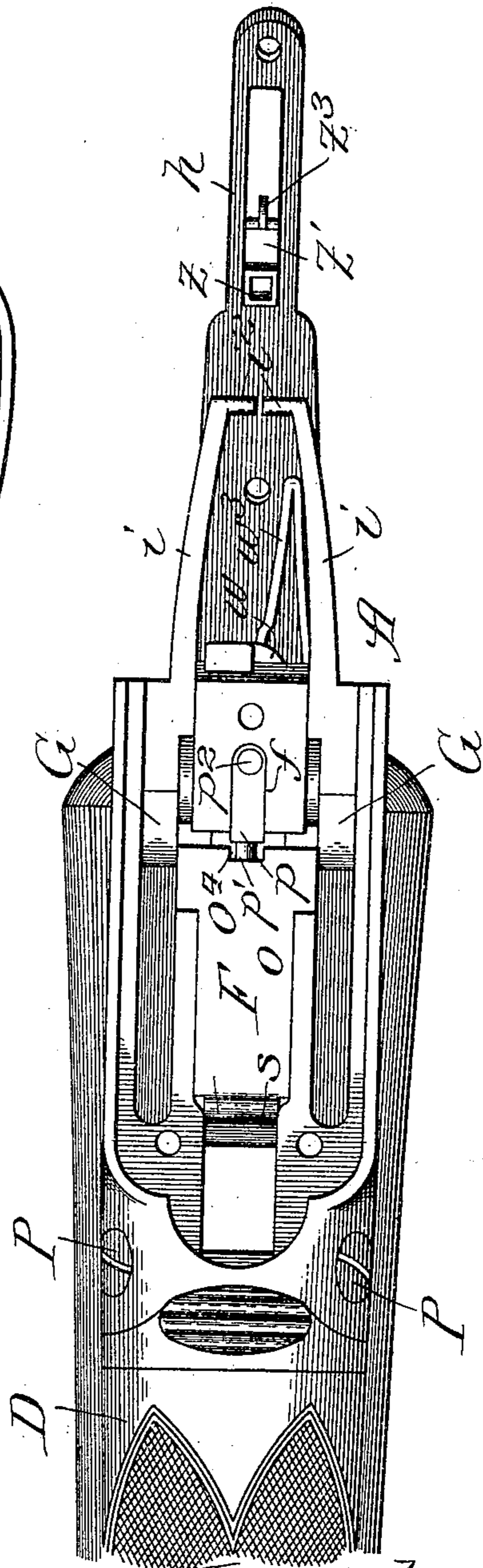
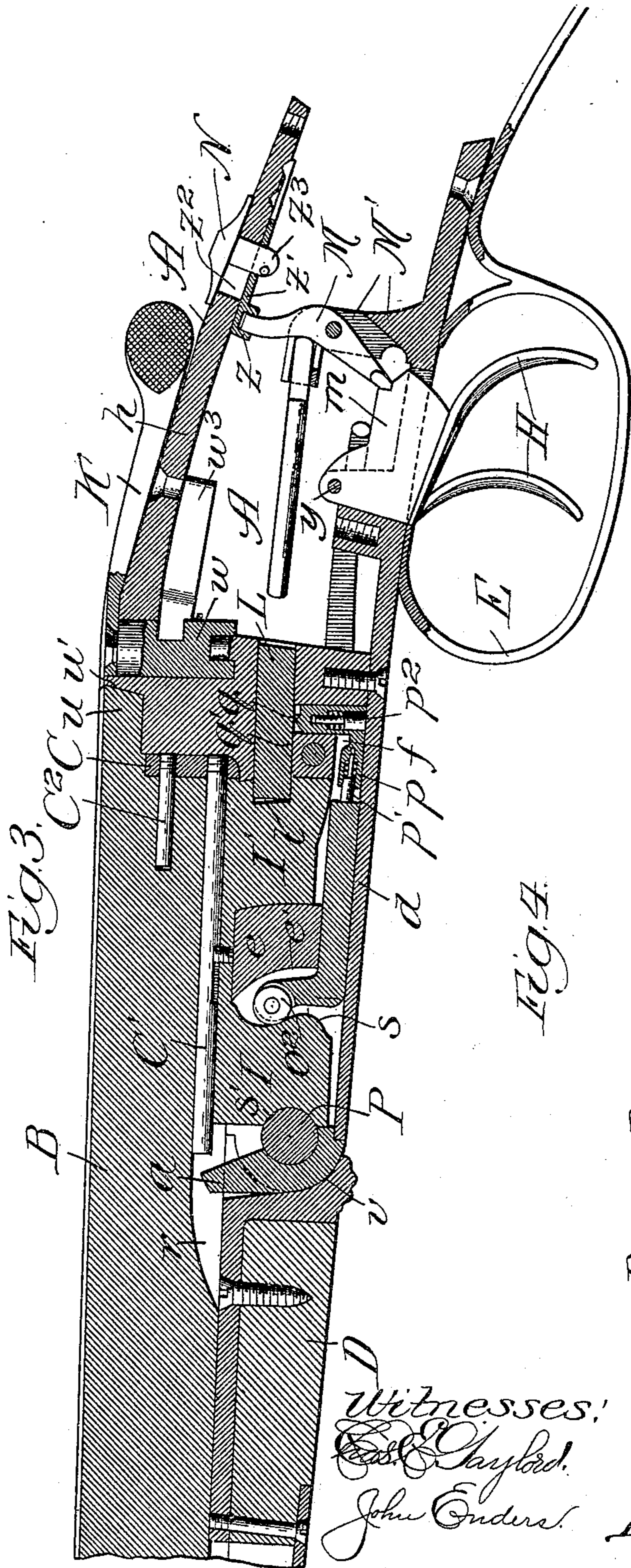
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3 SHEETS—SHEET 2.



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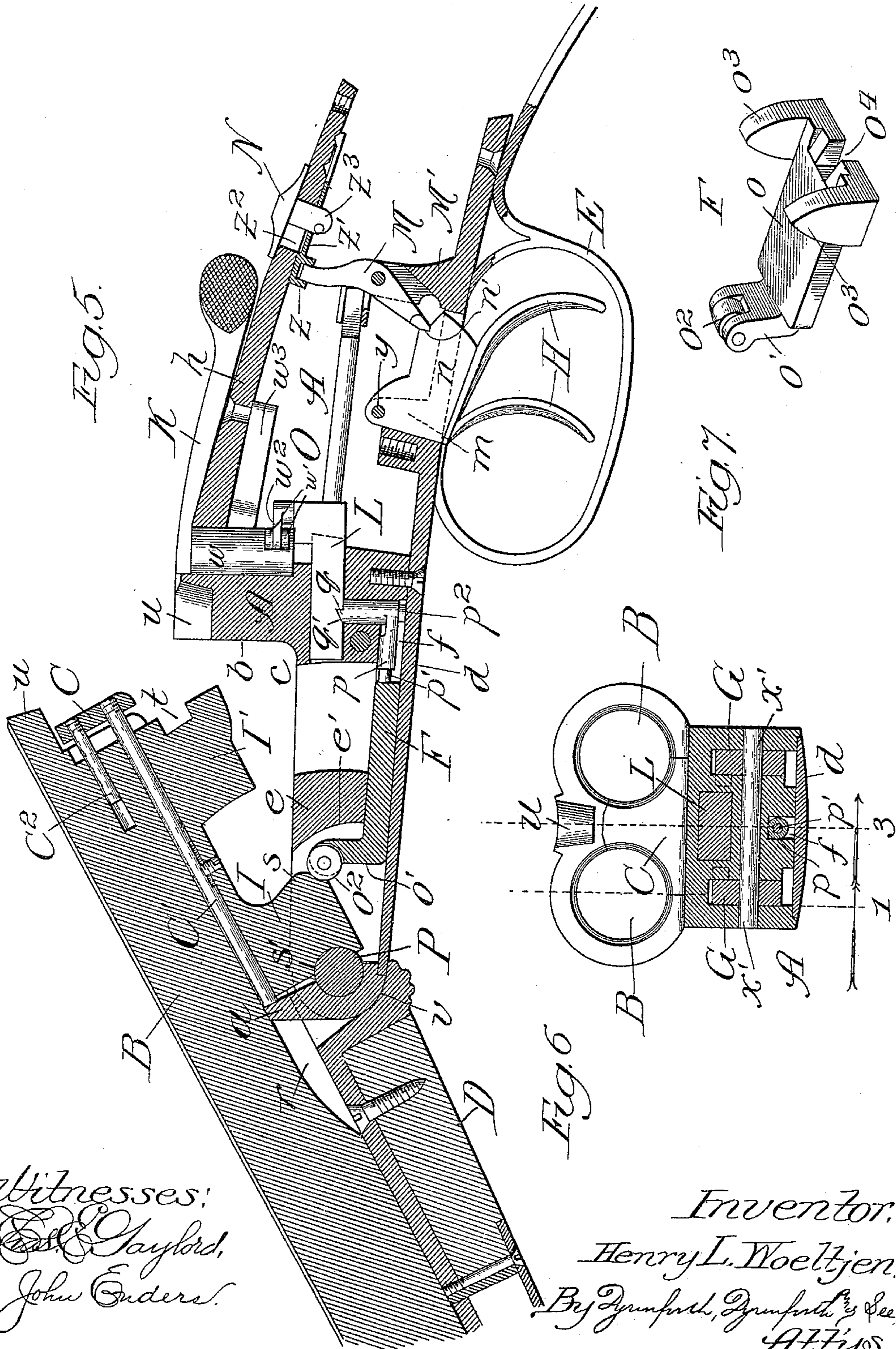
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

HENRY L. WOELTJEN, OF CHICAGO, ILLINOIS.

## GUN.

No. 822,808.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed September 29, 1905. Serial No. 280,683.

*To all whom it may concern:*

Be it known that I, HENRY L. WOELTJEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Guns, of which the following is a specification.

My invention relates to an improvement in the class of breech-loading hammer discharging guns, in which the barrel is hinged to adapt it to be opened and closed on its hinge-support and is releasably locked in its closed position by the "safety" operating mechanism of the gun.

The primary object of my invention is to effect, by a construction involving a comparatively small number of parts, cocking of the gun by the act of opening the barrel; and a further object is to cause the act of unlocking the barrel preparatory to opening it to reduce the condition of the gun to "safety" and maintain it in that condition during the cocking operation and until manually or intentionally released therefrom.

While my invention is applicable to a single-barrel gun, I have devised it especially for a gun of the double-barrel variety, and therefore illustrate it in that connection in the accompanying drawings, in which—

Figure 1 shows a gun mechanism embodying my improvement by a view in sectional elevation, the section being taken through the left-hand barrel at the line 1 on either Fig. 2 or Fig. 6 and viewed as indicated by arrows. Fig. 2 is a plan section of the frame base-plate, taken at the line 2 on Fig. 1 and viewed in the direction of the arrow, showing the relative positions of the sears by dotted lines; Fig. 3, a section taken at the line 3 on either Fig. 2 or Fig. 6 and viewed as indicated by arrows; Fig. 4, a bottom plan view of the mechanism as illustrated in Fig. 3, with the frame base-plate removed; Fig. 5, a view like that presented by Fig. 3, but showing the relative conditions of parts of the mechanism with the barrels opened; Fig. 6, a section taken at the line 6 on Fig. 1 and viewed in the direction of the arrow, and Fig. 7 a perspective view of the reciprocable block which forms the primarily important feature of my invention.

A is the metal frame carrying the operating mechanism and to the rear end of which the stock (not shown) is secured in any usual or suitable manner.

B B are barrels, shown to be equipped at their rear ends with an extractor device C, that shown being of well-known construction, and therefore not requiring to be particularly described herein.

The forward end of the frame A is rounded, as shown at *v*, to fit into the recessed metal-bound rear end of the wooden fore-end D, which is fastened to the under side of the barrels in any usual or suitable manner. From the longitudinal center of the rounded end *v* there projects upward and inclines slightly forward a lug *a*, and from this lug there extends backward to the base of the upright wall *b* of the frame a slot *c* of rectangular cross-section, closed along its under side by the frame-base *d*, which carries the trigger-guard E, and between the ends of the slot *c* there extends across it a bridging-piece *e*, dividing the slot into a forward section and a rear section, the end portion of which latter meets a longitudinal rectangular recess *f* in the base of said upright wall and the lower open side of which is covered by the frame-base *d*. The under side of the bridging-piece *e* extends short of the base of the slot *c* to form a chamber between it and the frame-base for the reciprocable confinement within it of the actuating block or head F, hereinafter described. In the under side of each wall of the frame forming a side of the slot *c* is provided a longitudinal chamber *g*, extending through the base of the upright wall *b*, in which latter the chamber has an upward extension *g'*. The rear portion of the upper part of the frame A consists of the tang *h*, by which to connect the frame, as usual, with the top of the stock. In the lower part of each chamber extension *g'* is pivoted near one end, at *x*, a sear *i*, pressed by a spring *i'*, confined against it, the sear being adapted to engage at one extremity with a shoulder *j* on a hammer G, journaled at *x'* in the rear end portion of the respective chamber *g* and engaged at a recess *j'* in the forward side of its lower part adjacent to the journal *x'*, by the free end of a spring *k*, confined in said chamber *g*. Each hammer is housed in a chamber extension *g'*, and the pin or point *l* on the face of its upper free end registers with an opening *l'* in the upright frame wall *b* coincident, as usual, with the center of the respective gun-barrel B. The triggers H H work through openings in the frame-base *d*, as usual, being pivotally supported at *y* on a

lug  $m$ , rising from the inner side of the frame-base, and the plate portion  $n$  of each trigger is provided in its rear end with an offset  $n'$  for a purpose hereinafter explained. The  
 5 sears  $i$  bear, under the pressure of their springs  $i'$ , upon the upper edges of the aforesaid plate portions  $n$ , whereby as the result of pulling a trigger its plate portion lifts the  
 10 end out of engagement with the hammer-shoulder  $j$ , thus freeing the hammer to be snapped by turning on its axis  $x'$  under the force of its spring  $k$ .

The head or block  $F$  consists of a flat plate  
 15  $o$ , forming its body portion, provided at one end with an upwardly-projecting nose-piece  $o'$ , having journaled in it an antifriction-roller bearing  $o^2$  and provided on its opposite end with upwardly-tapering ears  $o^3$ , one for  
 20 each hammer, and in the end of the plate  $o$ , midway between the ears, is formed a recess  $o^4$ . This head seats between its ends flatwise against the base of the bridge-piece  $e$  with the roller-bearing end adjacent to the  
 25 concave face  $e'$  and with the ears  $o^3$  registering with lugs  $j^2$ , projecting laterally toward each other from the lower end portions of the hammers  $G$ . Thus after a trigger has been manipulated to discharge the gun backward  
 30 movement, produced as hereinafter described, of the block  $F$  engages an ear  $o^3$  with a hammer-lug  $j^2$  and turns the hammer to the position in which it is represented in Fig. 1, wherein it is locked by engagement with its  
 35 shoulder  $j$  of the sear  $i$  ready to be released by again pulling the trigger and fired by the pressure of the spring  $k$ . In the recess  $f$  is contained a block  $p$ , in the forward chambered end of which a spring-pressed plunger  $p'$  is con-  
 40 fined to abut against the adjacent end of the block  $F$  in the notch  $o^4$  therein for the purpose of returning the block to its normal position, as and for the purpose hereinafter described. The block  $p$  also has an upright portion which  
 45 is provided on its upper end with a cam-tooth  $q$ , serving the purpose hereinafter explained, and in the lower chambered end of which is confined a vertical spring-pressed plunger  $p^2$ , bearing against the frame-base  $b$  and tending  
 50 to raise the block  $p$ .

Between the two gun-barrels, on their under side, is provided a longitudinal recess  $r$ , behind the rearward end of which is a rigid lug  
 55  $I$ , formed with a rear cam-face  $s$  and a forward groove  $s'$ , and behind and in line with the lug  $I$ , but shown to be formed integral therewith, is a rigid latch-lug  $I'$ , provided in its rear end with a bolt-receiving recess  $t$ . One of the  
 60 guide-rods  $C'$  for the extractor  $C$  extends and works longitudinally in the recess  $r$  over the parts  $I$  and  $I'$ , and the other guide-rod  $C^2$  works in a bore provided to receive it in the wall between the barrels  $B$ , as clearly shown in Fig. 3. The usual headed stem  $u$  projects  
 65 centrally from between the gun-barrels on

their upper side to enter and fit in a correspondingly-shaped recess  $u'$ , provided to receive it in the top of the upright wall  $b$ .

Behind the recess  $u'$  is journaled in the upright wall  $b$  a vertical shaft  $w$ , provided on its  
 70 upper end with a laterally-turning thumb-lever  $K$  and near its lower end with laterally-projecting ears  $w'$ , between which is pivoted one end of a link  $w^2$ , having its opposite end pivotally connected with the adjacent upper  
 75 end of a bolt  $L$ , which is reciprocally supported in the upright wall to enter the barrel-recess  $t$  and lock the barrels in their closed condition. The bolt contains in its under side a notch  $q'$  to be engaged with the  
 80 tooth  $q$ , as hereinafter described. A spring  $w^3$ , confined against the shaft  $w$ , is compressed by turning the lever  $K$  toward the right from its normal position of extending lengthwise along the tang  $h$  and tends to return it  
 85 to that position.

The safety device comprises a lever  $M$ , fulcrumed between its ends on a bearing  $M'$ , rising from the frame-base  $d$ , near its rear  
 90 end, to adapt the laterally-expanded lower end of the lever in turning it to enter the offsets  $n'$  in the rear ends of the trigger-plates  $n$ , and thus lock the triggers. For turning the lever for the purpose stated and to withdraw it from its locking condition its upper  
 95 end enters a socket  $z$  on a plate  $z'$ , slidingly supported against the under side of the tang  $h$ , toward its rear end, by connection through a longitudinal slot  $z^2$  in the tang with a  
 100 thumb-piece  $N$ , the stem  $z^3$  of which passes for guidance through the slot  $z^2$  and is connected with the plate  $z'$ . Provision is made for actuating the safety device by the bolt  $L$  by extending a rod  $O$  in the recessed upper  
 105 part of the bearing  $M'$  between the rear end of the bolt and the lever  $M$  above its fulcrum-point.

As will be understood by those familiar with the art to which my invention relates, the parts of the mechanism behind the up-  
 110 right wall  $b$  and between the base-plate  $d$  and tang  $h$  are housed in suitable openings, recesses, and the like provided to receive them in the gun-stock, which is rigidly embraced, as usual, between the frame base-plate and  
 115 tang.

To connect the barrels with the frame, the lug  $I$  is inserted into the section of the frame-slot  $c$  ahead of the bridge-piece  $e$  in a manner  
 120 to bring the concave face of the lug against a rigid cylindrical bearing-pin  $P$ , extending across the forward end of the frame and fitting into the rear concave side of the rounded end portion  $v$ . This operation introduces  
 125 the lug  $a$  for operating the extractor  $C$  into the slot  $r$ , and the barrels are thus hinged on the pin  $P$ , and by turning them on their hinge in the direction to engage the cam-face  $s$  with the roller  $o^2$  the block  $F$  is forced back-  
 130 ward against the resistance of the spring-

plunger  $p'$  and engages the ears  $o^3$  with the respective hammer-lugs  $j^2$ , with the effect of turning the hammers to the cocked position or that represented in Fig. 1, wherein they are locked by engagement with their shoulders  $j$  of the sears  $i$ . Return movement of the barrels on their hinge-support to close the breech and finally introduce the nose-piece  $u$  into its socket  $u'$  in the frame brings the latch-lug  $I'$  into position to register its recess  $t$  with the bolt  $L$ , introduction of which into the latch-recess locks the barrels in place. As the cam  $s$  clears the roller  $o^2$  the spring-plunger  $p'$  forces the block  $F$  into the position represented in Figs. 1 and 3, wherein the ears  $o^3$  are retracted from engagement with the hammers.

With the parts in firing condition, pulling the triggers trips the sears to discharge the gun in the usual way. Thereupon for extracting the cartridge-shells the barrels require to be opened. To permit the opening, the thumb-lever  $K$  is turned toward the right, with the effect of turning the shaft  $w$ , and accordingly retracting the bolt  $L$  out of engagement with the latch-lug  $I'$ , the retraction of the bolt sliding it over the tooth  $q$  until the latter registers with the notch  $q'$ , when the tooth enters the notch and retains the bolt in its withdrawn condition. Moreover, the backward movement of the bolt presses the rod  $O$  against the lever  $M$ , with the result of turning the lower end of the lever into engagement with the trigger-plate offsets  $n'$  and locking the triggers. Thus unlocked the gun is opened by turning the barrels to the position represented in Fig. 5, in reaching which the cam-lug  $I$  forces backward the block  $F$  to cause its ears  $o^3$  to cock the hammers, and after extraction of the shells and reloading turning the barrels back on their hinge releases the block  $F$  to permit it to be forced forward by the spring-pressed plunger  $p'$  for disengaging the ears  $o^3$  from the hammers, and as the lug  $I'$  reaches its innermost position it encounters the block  $p$  and depresses it against the resistance of the spring-pressed plunger  $p^2$  to withdraw the tooth  $q$  from the notch  $q'$  and permit the expansive force of the spring  $w^3$  to turn the shaft  $w$  in the direction to shoot the bolt into the latch-recess  $t$  and lock the barrels in place, and thus turning the shaft  $w$  returns the thumb-lever to its normal position of extending lengthwise of the tang  $h$ . Thereupon by moving the thumb-piece  $N$  forward and retracting the lever  $M$  from engagement with the triggers they may be pulled to discharge the gun. As will therefore be seen, the effect of the first operation—namely, that of unlocking the barrels to permit opening thereof—is to lock the triggers and reduce the gun to its safety condition, in which it remains until manually or purposely released, meantime preventing

any possibility of firing, and the effect of the subsequent operation of opening the barrels, besides extracting the shells, is to actuate the block  $F$  to cock the hammers. It will also be seen that the mechanism involves comparatively few parts, thereby accomplishing the all-important object of my invention, the cocking of the gun being produced by the action of the barrels in turning against a single movable part—namely, the block  $F$ —and this without dependence of any kind for the operation on the fore-end, which in my construction merely serves to keep the barrels in place.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a gun of the character described, the combination of a trigger-equipped frame having a hinge-pin on its forward end and containing a longitudinal slot provided with a bridging-piece, spring-containing chambers at opposite sides of said slot, hammers pivotally supported in said chambers and engaged by the springs therein, sears engaging said hammers, a pair of barrels provided with a lug having a cam-face on its rear side and a recess in its forward side at which it hingedly engages with said pin, and a spring-pressed block provided on one end with a roller and on its opposite end with ears and reciprocally confined in said slot to extend across said bridging-piece, with said roller engaging said cam-face and said ears engaging the hammers, said block being adapted to be actuated by the cam-face in turning the barrels on their hinge to fully cock the hammers by the sole act of turning the barrels.

2. In a gun of the character described, the combination of a trigger-equipped frame, a sear-locked spring-pressed hammer supported on said frame, a barrel hingedly connected with the frame and carrying near its rear end a cam-lug and a latch-lug, a block reciprocally confined in the frame and actuated by said cam-lug in turning the barrel on its hinge-support to engage and cock the hammer, a spring-pressed bolt reciprocally supported in the frame to engage said latch-lug and provided with a notch, a spring-pressed block movably supported below the bolt and provided with a tooth in the path of said notch for locking the bolt in retracted position and carrying a spring-pressed plunger extending in the path of said reciprocally-confined block, said toothed block extending in the path of said latch-lug to be depressed by closing the barrel, and a safety device on the frame actuated to lock the trigger by retracting the bolt.

HENRY L. WOELTJEN.

In presence of—

A. U. THORIEN,  
J. H. LANDES.