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G. PROLA
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Serial No.
306,568
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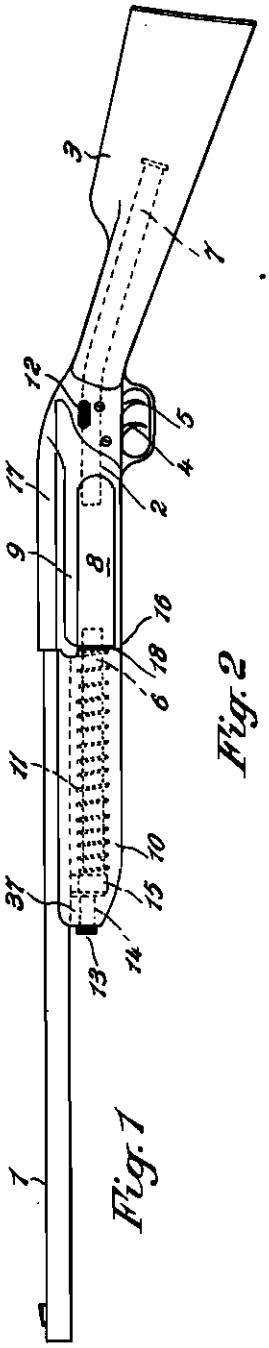

Fig. 1

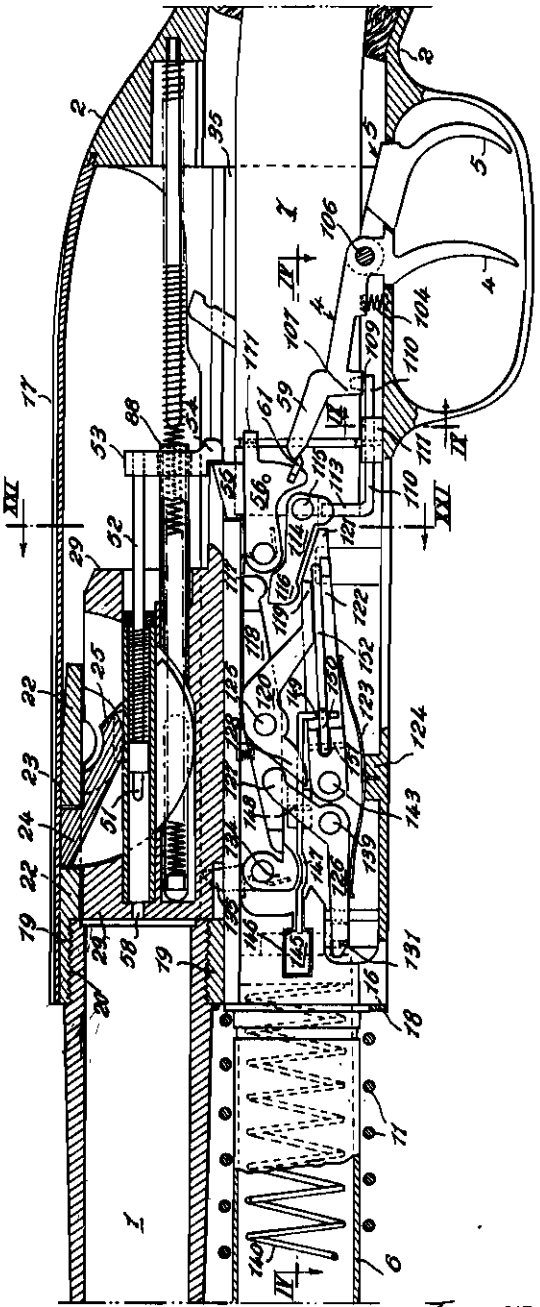

Fig. 2

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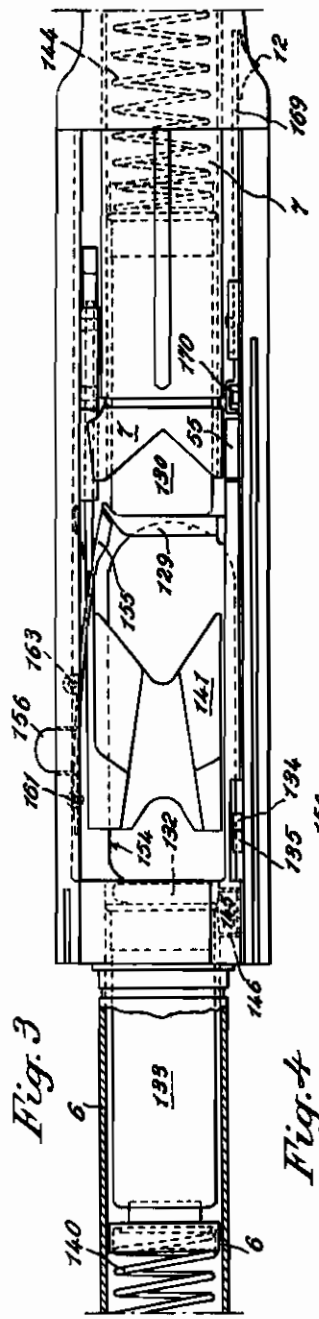

Fig. 3

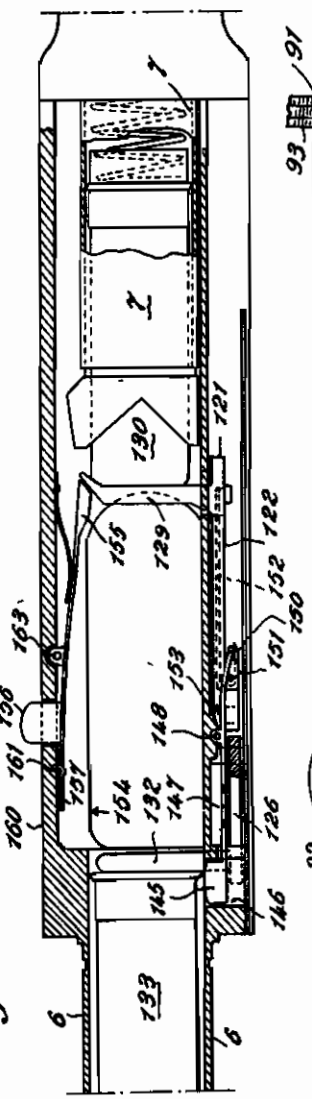

Fig. 4

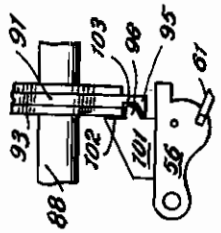

Fig. 24

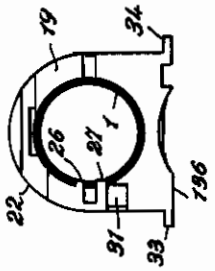

Fig. 20

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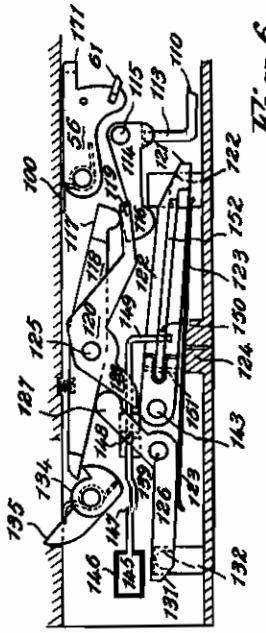

Fig. 6

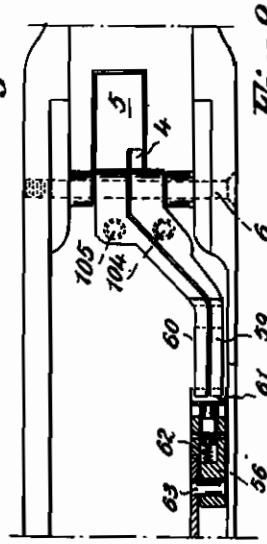

Fig. 8

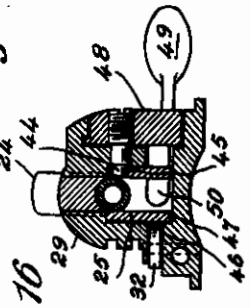

Fig. 16

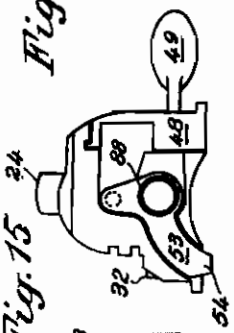

Fig. 15

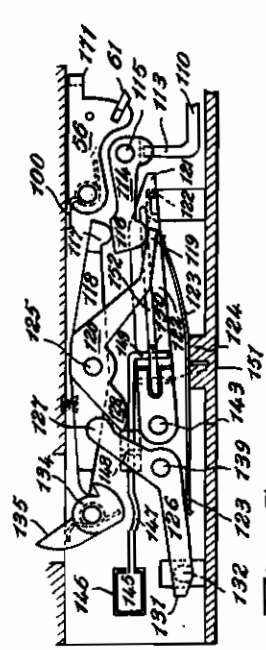

Fig. 5

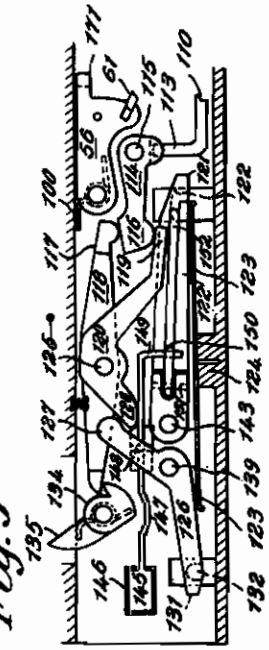

Fig. 7

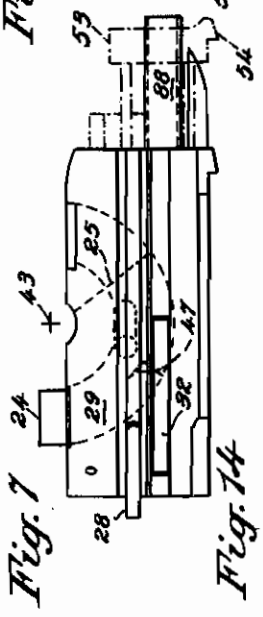

Fig. 14

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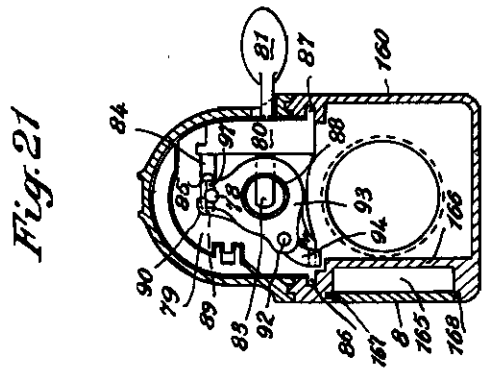

Fig. 21

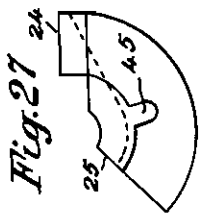

Fig. 27

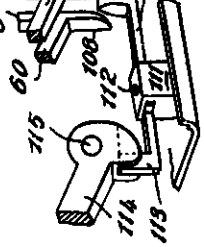

Fig. 11

Fig. 10

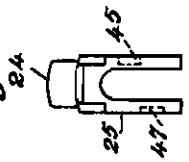

Fig. 26

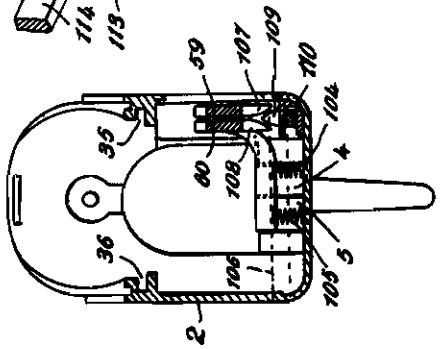

Fig. 9

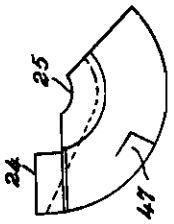

Fig. 25

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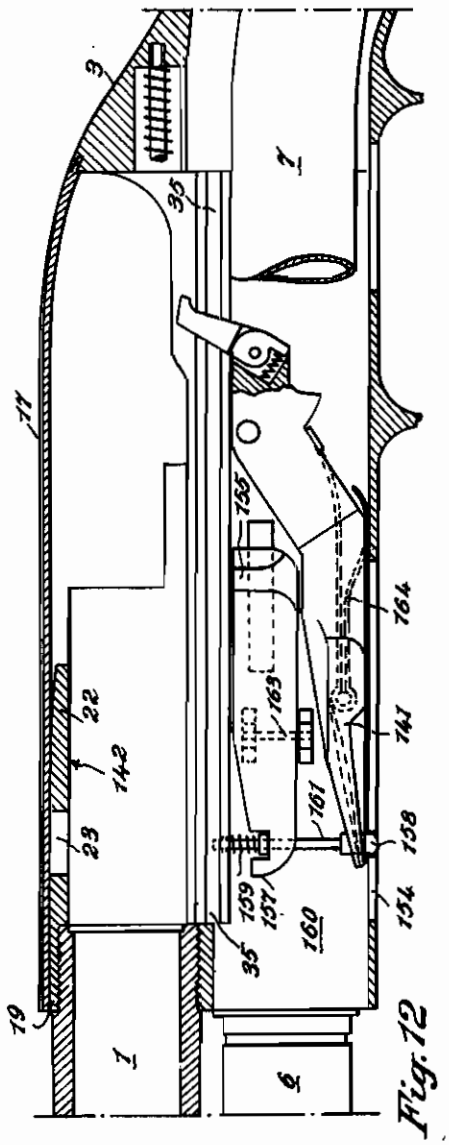

Fig. 12

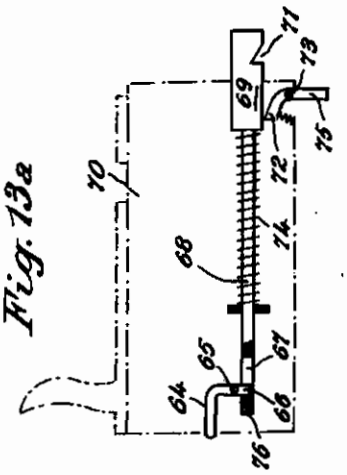

Fig. 13a

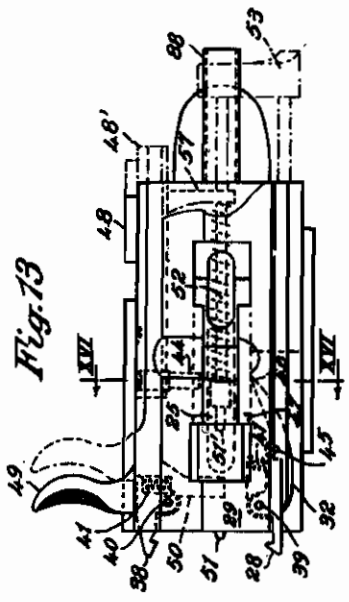

Fig. 13

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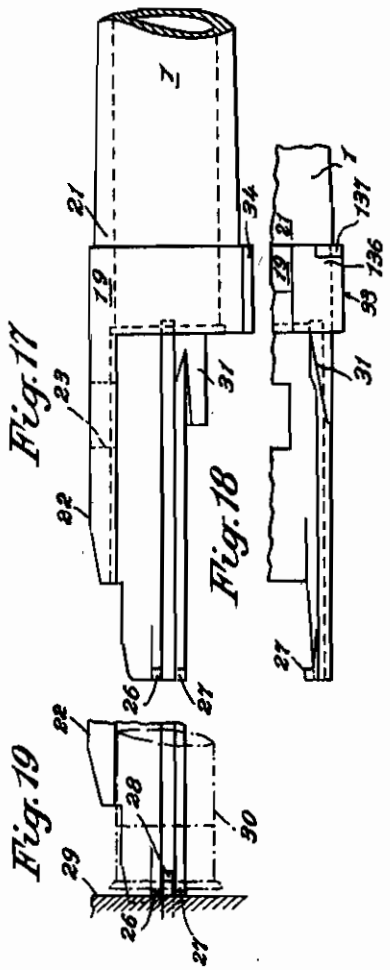

Fig. 17

Fig. 18

Fig. 19

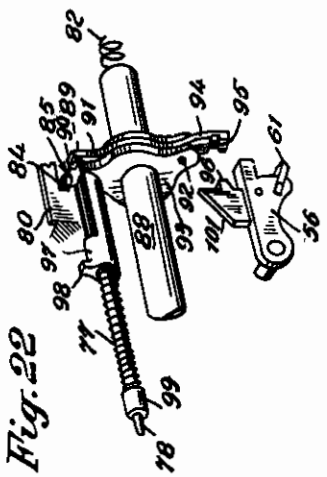

Fig. 22

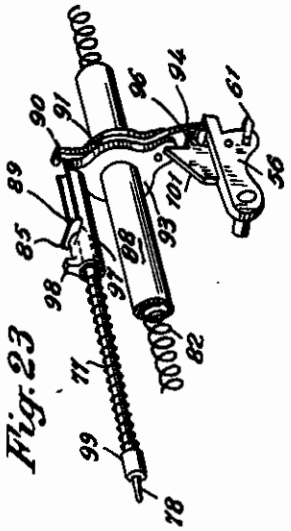

Fig. 23

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AUTOMATIC SHOOTING GUN WITH ONE BARREL, TWO DISTINCT MAGAZINES FOR CARTRIDGES AND A DEVICE FOR SELECTING SAID MAGAZINES

Goffredo Prola, Rome, Italy; vested in the Alien Property Custodian

Application filed November 28, 1939

The present invention relates to an improvement for an automatic shooting gun and regards properly a new automatic shooting gun. This gun being provided with two magazines of independent cartridges for the shots successive to the first allows the hunter to have at his disposition cartridges of different characteristics (for instance as to thickness of the lead) so that he may decide at the moment of firing which of these cartridges has to be introduced into the barrel for the subsequent shot. In other words with this gun which may fire three or more shots the hunter can when firing the shot in the chamber, decide which cartridge of the one or the other magazine has to be introduced for the subsequent shot when the first shot had missed the mark, so that in such a way the type of the cartridge may be adapted to the game to be aimed at.

This automatic gun with a full recoil of bolt and barrel has besides the important advantage that the cartridges to be introduced in the barrel may be chosen on the spot owing to its determined characteristics: (1st) a finer shape than the other guns of the same kind; (2nd) a more stable equilibrium since the cartridges are subdivided in two magazines one forward, the other backward the centre of gravity of the arm; (3rd) the possibility of being easily inspected and cleaned in all its parts.

The gun comprises the following main parts: a barrel, a bolt, a sear and striking mechanism, two tubular magazines for reserve cartridges; a preselecting device controlling the clearing of the cartridges out of the two magazines independently one from the other according to the choice of the marksman; an elevating device for elevating the cartridges to the orifice of the explosion chamber; a central body or frame conveniently holding together the different pieces; a protecting cover for the bolt and motion; a protecting cover of the device controlling the clearing of the cartridges out of the two magazines; a butt; a rod.

The movements automatically occurring at each firing when the trigger is pulled down are the following:

(1) Unhooking of the striker, percussion and ignition of the copper cap and firing of the cartridge being inside the barrel; at the same time with the unhooking of the striker a lever is displaced, which, as explained further on, predisposes which of the two magazines will furnish the cartridge for the subsequent shot.

(2) Recoil of the bolt entraining the barrel hooked thereon; blocking of the striker disengaging control.

(3) Stopping of the recoiling mass at the end of the recoil stroke, hooking of the bolt.

(4) Unhooking of the barrel, cocking of the striker, blocking of the catch, forward return of the barrel, expulsion of the fired case and clearing of the cartridge of one of the two magazines.

(5) Displacement of the cartridge cleared out of the magazine above the elevator, unblocking of the elevator.

(6) Elevation of the cartridge through the elevator to the opening of the firing chamber; unhooking of the bolt.

(7) Return of the bolt forwards, introduction of the cartridge into the firing chamber; lowering of the elevator; unblocking of the catch hooking again the bolt on the barrel; unblocking of the striker releasing control.

The gun is ready for a new shot.

According to a further form of realisation of the present invention, in which the striker is cocked during the recoil stroke of the bolt and not during the forwardstroke, the movements automatically occurring in this case at each firing by pulling one of the triggers are the following:

(1) Unhooking of the striker, percussion and ignition of the cap, firing of the cartridge in the barrel; simultaneously with the releasing of the striker there is a displacement of the lever predisdosing, as furtheron explained, which of the two magazines will furnish the cartridge for the subsequent shot.

(2) Recoil of the bolt entraining the barrel hooked therein; cocking and blocking of the striker.

(3) Stopping of recoiling mass at the end of the recoil stroke; hooking of the bolt.

(4) Releasing of the barrel; blocking of the lock, return of the barrel forwards; expulsion of the case fired and clearing of a cartridge out of one of the two magazines.

(5) Displacement of the cartridge cleared out of the magazine above the elevator; unblocking of the elevator.

(6) Elevation of the cartridge by means of the elevator as far as the opening of the firing chamber; unhooking of the bolt.

(7) Return of the bolt forwards; introduction of the cartridge into the firing chamber; lowering of the elevator; displacement of the group striker and sear control device hooked thereon; releasing of the lock hooking again the bottom of the barrel.

The gun is ready again for firing.

The present invention is here illustrated and described with reference to the accompanying

drawing in two forms of realisation, but it is understood that constructive changes may be introduced therein without surpassing the limits of protection according to the present industrial patent. Particularly though a gun with two triggers, the invention may be realised with a gun with only one trigger, the preselecting member mentioned being in such case controlled by a convenient member accessible to the hands of the rifleman during firing, for instance a knob or a lever. Furthermore it is not indispensable that the magazines are disposed one forward, the other backward the elevator, both may be on the front or on the back, one on the side of the other or one over the other provided both may feed at choice the elevating device of the arm. This expression "elevating device" means not only the normal mechanism raising (downward upward) the cartridge bringing the same in correspondence to the bolt or the breech of the arm but any other equivalent mechanism capable of taking a cartridge out of one of the magazines and bringing it with a transversal, longitudinal, translatory, rotatory motion and the like in such a position as to be introduced into the breech chamber.

Among the different possible forms of realisation mentioned, the one has been preferred in which the two magazines are tubular and disposed one on the front of the elevating device, under the barrel and parallelly thereto, the other on the back of said device inside the butt assuming in this case a rather curved shape to be adapted to the inclination of the butt as regards the axis of the barrel. This disposition allows a very good balance of the gun, a minimum encumbrance, a better disposition of the mechanisms and a pleasant external shape of the arm.

According to the present invention the firing and preselecting device is totally enclosed in a thin side chamber of the frame of the arm, covered by a small plate, all the parts of the mechanism being easily inspected or dismounted when this plate is removed. This disposition constitutes a characteristic of the present invention.

The invention is illustrated, as already mentioned, in the accompanying drawing in which:

Fig. 1 is a side view in elevation of an automatic shooting gun with only one barrel and two magazines for cartridges, according to the invention.

Fig. 2 is a vertical, longitudinal axial section in a larger scale of the arm shown in Fig. 1 with some parts omitted for clearness sake. The parts are illustrated in the position of the gun ready for firing. The bolt is illustrated according to a first form of realisation.

Fig. 3 is a plan view and in partial section corresponding to Fig. 2.

Fig. 4 is a horizontal section according to line IV—IV of Fig. 2 and illustrates some details.

Fig. 5 illustrates the position assumed by some parts of the feeding device of the arm after actioning the trigger predisposing the advancing of a cartridge from the front magazine to the elevating device.

Fig. 6 shows the same parts as Fig. 5 after actioning the trigger predisposing the feeding from the back magazine.

Fig. 7 shows the same parts of Figures 5 and 6 after actioning the trigger predisposing the feeding of the front magazine when in this magazine no cartridge is to be found;

Fig. 8 shows in a plan view the mechanism of the triggers of the arm with some parts omitted for clearness' sake.

Fig. 9 is a vertical section according to line IX—IX of Fig. 2 and illustrates in a front elevation the mechanism of the triggers;

Fig. 10 is a plan view of the rocking lever with vertical axis of oscillation serving for the preselection of the two magazines under the action of said triggers;

Fig. 11 is a detail of the preselecting mechanism controlled by the triggers in a perspective view;

Fig. 12 is a vertical longitudinal section of the arm illustrated in Fig. 2 with some parts omitted, with the object of showing the cartridge elevating device;

Fig. 13 is a plan view of a first form of realisation of the bolt as already illustrated in Fig. 2

Figs. 14 and 15 are respectively a side elevation and a back elevation, view of the bolt illustrated in Fig. 13.

Fig. 16 is a vertical transversal section according to line XVI—XVI of fig. 13.

Fig. 13*a* illustrates schematically a second form of realisation of the bolt;

Fig. 17 shows a right-hand side elevation of the breech of the moveable barrel illustrated in the preceding figures;

Fig. 18 illustrates in a partial view and in a turned up plan view the breech shown in fig. 17.

Fig. 19 shows schematically the engagement between the tail of the breech and the cartridge-bottom kept in the bolt by means of the pawls of the extractor;

Fig. 20 is a view in elevation of the breech back illustrated in fig. 17.

Fig. 21 is a section according substantially to line XXI—XXI of fig. 2 with parts omitted for clearness' sake and illustrates a modification of the cocking and releasing device of the striker;

Figs. 22—23—24 illustrate some details relating to the cocking and releasing device of the striker shown in fig. 21.

Figs. 25—26—27 illustrate in a left-hand side elevation, in a backward and right-hand side elevation the rotatable lock of the bolt.

The invention will be now described with reference to the form of realisation of figures from 1 to 20.

The shooting gun subject matter of the invention, fig. 1, comprises a single barrel 1 sliding on the gun stock 2 ending in a butt 3. This butt 3 is provided downward with two triggers 4, 5 and when these are actioned on, the shot already in the barrel is fired and simultaneously the feeding mechanism is predisposed for the advance of a cartridge from the front magazine 6 or from the back one 7 according to which trigger has been operated on. A plate 8 sliding in the left-hand wall 9 of the stock 2 covers and protects the preselecting mechanism of the cartridges while an anterior prolongation 10 of said stock 2, preferably of wood, is hollow and receives the front magazine 6 of the cartridges and the recuperating spring 11 of the barrel.

On the side of the stock 2 there projects the knob 12 of the safety device. The anterior prolongation of the stock 2 is held in position by means of a roughened knob 13 screwed on a prolongation 14 of the front magazine 6. This latter of a cylindric shape on the outside constitutes simultaneously a guide for the sleeve-like lug 15 of the barrel 1, against which lug operates the recuperating spring 11 mentioned.

The other end of the spring 11 bears against the anterior face 10 of the stock 2.

The stock 2 is totally hollow and contains the whole charging and firing mechanism of the arm. On the top it is closed by a cover 17 which covers and protects the breech of the barrel and the bolt, these parts not being illustrated in fig. 1. The cover 17 is anteriorly provided with a flat vertical lug 18 lodged on the anterior face 16 of the stock 2 and constitutes in its turn a support for the anterior prolongation 10 of the stock 2. Said prolongation 10 is pressed against said lug 18 by means of said roughened knob 13.

With reference now to figures 2—3—4 the barrel 1 is posteriorly provided with a sleeve 19 screwed in 20 on the posterior end 21 of the barrel 1. The sleeve 19 (see also figs. 17—18—19—20) is provided with a posterior superior lug 22 with an eye-hole 23 in which engages the tooth 24 of the rotatable lock 25, more particularly described furtheron with reference to figures 25—26—27. The lug 22 is posteriorly provided with two teeth 26 and 27 capable of cooperating with the tooth 28 of the extractor provided on the bolt 29 for the expulsion of the case 30 (figures 17—18—19—20). The sleeve 19 has furthermore an inclined surface 31 (figures 17—18—20) destined to cooperate with the rocking lever 32 of the bolt 29. The functioning of these parts is explained furtheron.

The sleeve 19 is finally provided with two inferior slideshoes 33 and 34 sliding in the guiding grooves 35 and 36 (fig. 9) obtained inside the gunstock 2 to direct the barrel while longitudinally sliding.

The wooden prolongation 10 covers and protects, as already mentioned, the lug 15 of the barrel 1, the recuperating spring 11 and the front or anterior magazine 6. Anteriorly it ends with a thick wall 37 (fig. 1) constituting a stop for the forward stroke of the lug 15 and barrel 1.

The bolt 29 comprises a block provided with the following pieces: two teeth 26 and 38 pivoting in 39 and 40 and strained by springs 41 and 42 said teeth forming the device for extracting the cartridge from the barrel; a lock 25 (see also figs. 25—26—27) with circular motion around a centre of rotation 43 (fig. 14) determined by the cooperation of the pivot 44 with a cavity 45 provided on the right side of the lock 25. This latter has the object of hooking the bolt 29 on the barrel 1 by engaging its tooth-shaped lug 24 into the eye-hole 23 of the posterior prolongation 22 of the sleeve 19. As already mentioned the sleeve 19 is solidary to the threaded back end 21 of the barrel 1 by screwing.

The bolt is further provided with the said lever 32 for blocking the lock (figures 15—16—17—18). The rocking lever 32 is fulcrumed in 45 and by its back and 46 tends to be engaged in the cavity 47 provided in the left side of the lock 25 by means of a spring not illustrated for clearness' sake. The rocking lever 32 serves to block the lock when this is completely slipped into the bolt.

In the right side of the bolt 29 slides a body 48 controlled by a catching member 49 in which engages the finger of the person using the arm in order to obtain the running backwards of said sliding body 48 against the action of a spring (not illustrated) operating on the transversal lug 59 of said sliding body 49.

The sliding body 48 acts, by means of the pivot 44 on the lock 25 disengaging the same from the eye-hole 23 of the tail 22 of the breech of the barrel 1.

The striker 51 (Fig. 13) is illustrated in the cocked position with dash lines and indicated by reference number 51'. The striker is strained to advance by a spring 52 and is carried by a moveable body 53 which in the return stroke forward of the bolt 29 engages with the projection 54 of a tooth 55 carried by a swinging lever 56 (see Fig. 2). The spring 52 (Fig. 13) bears posteriorly against the lug 57 of the sliding member 48 which in Fig. 13 is indicated in the back position by reference number 48'. The snapping forward of the striker to hit the cap of the cartridge through the hole 58 of the bolt 29 is determined by the anterior fingers 59 and 60 of the triggers 4 and 5 acting on tooth 61, which is pushed outside with respect to the swinging lever 56 by a spring 62 in such a way as to allow the free passage from downward upward of the fore ends of the fingers 59 and 60, but to be engaged with such ends when these are moving from upward downward. Each of the fingers 59—60 may act independently from the other on the tooth 61 causing the lowering of the swinging lever 56 around its fulcrum 63. The lowering of the lever 56 releases the tooth 54 of the moveable body 53 allowing the striker 51 to run forward under the action of its own spring 52.

Fig. 13a illustrates schematically a second form of realisation of the bolt, in which a striker 64 fulcrumed in 65, is provided with a lug 66 cooperating with the eyelet 67 of a rod 68. This rod ends with a body 69 projecting back with respect to bolt 70 and provided with a notch 71 destined to cooperate with a pawl 72 fulcrumed in 73 on the body of the bolt. A spring 74 stresses backward the body 69 in the position shown in Fig. 13a. The pawl 72 is provided with a lug 75 projecting out of the profile of the bolt 70. At the end of the recoil of the bolt 70, the body 69 meeting a fixed surface on the frame of the arm, enters the bolt 70 and the pawl 72 engages the notch 71 holding the body 69 and consequently the rod 68 and eyelet 67 in the advanced position without however acting on the striker 64. By acting in a convenient way by means of a trigger on the lug 75 of the pawl 72, the body 69, the rod 68, the eyelet 67 are abruptly displaced backwards while the fore end 76 of the eyelet 67 runs against the lug 66 of the striker 64, which then abruptly advances hitting the cap of the cartridge. The characteristic of this type of bolt schematically illustrated and described lies in the fact that the spring 74 of the striker is cocked up during the recoil stroke of the bolt, differently from the form of realisation precedently described (Figs. 13—14—15—16) in which the spring 52 of the striker 51 is cocked up only when the bolt 29 advances again.

Another form of realisation of the striker is illustrated in the Figures 21—22—23—24. Also in this case the spring 77 of the striker 78 is cocked up during the recoil stroke of the bolt. The bolt, here indicated by reference number 79 carries a sliding body 80 provided with a tooth (not illustrated) serving for hooking the bolt 79 at the end of its recoil stroke; this body 80 is provided with a pivot similar to pivot 44 of Figures 13—16, transmitting its motion to the lock causing the same to swing angularly around its own axis of rotation; the moveable body 00 is provided with a gripping member 91 serving for the hand movement of the bolt. The sliding body is provided with a lug 93 (Fig. 2) quite similar to the lug 59 illustrated in Figures 13 and 16 on which operates the recuperating spring of the

bolt indicated by reference number 82 in Fig. 23. The body 88 is finally provided with a tooth 84 preventing the striker 78 from hitting the cap by holding it by means of the tooth 85 if the sliding body 88 has not yet reached completely its position of advance and consequently the lock (not illustrated) similar to the lock 25 of Figures 13—16 is not yet hooked on the sleeve 19 of the barrel 1, penetrating into the eyelet 23.

Two guides 86 and 87 direct the bolt in its sliding motion. A tubular prolongation 88 serves as external guide for the recuperating spring 82 of the bolt, which acts indirectly on the lock by pushing a lug 83 of the sliding body 89, this body, as already mentioned, being pivotally connected to the same lock.

The percussion mechanism comprises a striker 78 traversing the whole bolt and ending posteriorly with the lug provided with two teeth 85 and 89 (Figures 21—22—23). On the tooth 85, as already said engages the tooth 84 of the sliding body 80 of the bolt while on the tooth 89 grips the end 99 of the lever 91 applied to the moveable member 93 on which it is fulcrumed in 92. The lever 91 is provided at the lower end with a lug 94 with a tooth 95 destined to engage the tooth 96 provided on the swinging lever 56 already described. The sliding body 93 is provided with a tubular lug 97 provided on its turn with a stopping tooth 98 restraining its stroke backwards, cooperating with a stop (not illustrated) obtained on the body of the bolt. The tubular lug 97 in its back part is slotted upward in such a way that the lug of the striker 78 with the teeth 85 and 89 is allowed to come out. The back part of the tubular lug 97 serves as a guide for the rod of the striker 78.

The tubular prolongation 89 mentioned, solidary to the body 79 of the bolt serves as a guide also for the movable member 93.

The spring 77 of the striker 78 stresses the latter by leaning on its anteriorly thickened part 99, while posteriorly presses against the fore end of the tubular lug 97 of the sliding body 93. This spring 77 is loaded when the sliding body 93 is obliged, owing to the recoil of the bolt and the stop met by the same backward on the frame of the arm to advance with respect to the recoiling bolt and to enter into the seat provided therein. Then the tooth 89 of the striker 78 engages the tooth 99 of the swinging lever 91 and the spring 77 remains under tension to snap then when; owing to the action of the tooth 96 the tooth 95 and the lug 94, the lever 91 swings on the outside around its own pivot 92 causing the tooth 99 to abandon the tooth 89. Then the striker 78 owing to the action of its own spring 77 abruptly advances to hit the cap of the cartridge. The tooth 96 as already above mentioned is solidary to the swinging lever 56, which is lowered by the action of the fingers 58 and 60 of the triggers 4 and 5 on the small tooth 61 of the lever 56.

Also in this case as in the one of figure 13*a* the advantage is obtained that the spring 77 of the striker is loaded during the recoil stroke of the bolt improving thus the conditions of the functioning of the recuperating spring of the bolt which when extending has not to overcome the strength of the striker spring.

The three forms of realisation of the bolt above mentioned may be indifferently used in the shooting gun according to the invention the releasing and percussion control in all the three cases being as follows:

The releasing and percussion mechanism comprises the lever 56 already mentioned, operated on as said by the triggers 4 and 5. A spring 100 stresses the lever 56 to remain in the position illustrated in the figures 2—5—6—7—22—23 and 24 that is raised up and in engagement with its own tooth 55 (or 88) in the tooth 54 (or 95) which, when free, causes the striker to be released as above described.

In the case of the figures 22—23—24 the tooth 96 is carried by a lug 101 of the lever 56, said lug being destined to engage the sliding body 93 in the point 102 as better illustrated in fig. 24. The tooth 98 penetrates into the notch 103 lying over the tooth 95 of the swinging lever 91, without touching the bottom. The lug 101 constitutes therefore a stop for the advance stroke of movable body 93 when this body is stressed to advance by the engagement of the tooth 98 with a stop surface solidary to the bolt 78 above mentioned.

The triggers 4 and 5 (figs. 2—8—9—10—11) are provided inferiorly with the springs to pull off 104 and 105 stressing them to remain in the position of rest around their common axis of oscillation constituted by the passing screw 106. The fingers 58 and 60 of the triggers 4 and 5 are provided inferiorly with the lugs inclined towards the outside 107 and 108 destined to cooperate with the wedge-shaped end 109 of a rocking lever 110 mounted in the block 111 of the frame of the arm by means of a vertical pivot 112. The rocking lever 110 is displaced to the position 110′ when the trigger 4 is lowered with its lug 107 consequently, while it is displaced to the position 110″ when the trigger 5 with relative lug 108 is lowered. The displacement of the rocking lever 110 causes, by means of its own end 113 the sliding of a swinging lever 114 (figs. 2 and 11) along its own axis 115 so that the fore head 116 of the lever 114 is interposed between the head 117 of the rocking lever 110 and the end 119 of the swinging angle lever 120, or between the head 117 of the rocking lever 110 and the end 121 of the swinging lever 122 according to which trigger 4 or 5 has been lowered. The head 116 of the member 114 constitutes a simple transmission member between the rocking lever 110 and the one or the other, at choice, of the levers 120 and 122. The lever 122 is stressed to remain in a raised position, fig. 2) by the leaf spring 123, fixed in 124 on the frame of the arm, while the end 149 of the angle lever 120, fulcrumed in 125, is stressed to remain in raised position (fig. 2) by the same spring 123 acting on the arm 126 of an angle lever whose second arm 127 stresses in left-hand direction the second arm 126 of the angle lever 126. The end 121 of the lever 122 (figs. 3 and 4) is provided with a transversal lug 129 which in the raised position of the lever 122 (fig. 2) holds the cartridge 130 tending to come out of the back magazine 7 of the arm. The end 131 of the swinging lever 126, 127 (figs. 3 and 4) is provided with a transversal lug 132, which in the raised position of the arm 126 (fig. 2) holds the cartridge 133 tending to come out of the fore magazine 6 of the gun. The lowering of the lug 129 allows the exit of the cartridge 130 from the back magazine while the lowering of the lug 132 controls the exit of the cartridge 133 from the fore magazine.

The rocking lever 118 is controlled by the pawl 134 which during the recoil stroke of the barrel 1 acts freely controlled by the same barrel (while it is acted on operatively during the advance return of the barrel. The barrel 1 acts on the up-

per prolongation 135 of the pawl 134 by means of the left inferior surface 136 (figures 18 and 20), provided with an inclined plane 137, a sleeve 19 screwed on the breech 21 of the barrel. When the bolt 29 is closed (fig. 2) the upper prolongation 135 of the pawl 134 is received in the seat provided to that purpose 138 in the forepart of the left side of the bolt.

By pulling down one or the other of the triggers 4 and 5, for instance the trigger 4, the rocking lever 118 is caused to swing around its own vertical axis 112 reaching for instance, the position 110' (Fig. 10). Consequently there takes place a side displacement of the member 114 sliding on its own pivot 115, the head 116 of said member being brought between the head 117 of the rocking lever 113 and the back end of one of the levers 120 and 122 for instance between the head 117 and the back end 119 of the lever 120. In this manner when the barrel passes from the backward to the forward position illustrated in Fig. 2 and the pawl 134 is consequently caused to swing in the left-hand sense owing to the engagement of its lug 135 with the inclined plane 137 and the surface 136 of the sleeve 19 (Figs. 18 and 20) the rocking lever 118 swings in the right-hand sense around its own pivot 125 (this pivot 125 being common to the rocking lever 119 and the angle lever 129) and with its own head 118 by means of the interposed head 116 of the member 114 pushes downward the end 119 of the lever 120 which on its turn swings in the right-hand sense around the said pivot 125 and with its fore branch 128 causes the raising of the arm 127 of the angle lever 126, 127. This latter consequently swings in the left-hand sense around its own pivot 139, but lowering its own fore end 131 with the transversal lug carried thereby 132. The cartridge 133 (Fig. 4) is then released and under the action of the spring 148 of the fore magazine 6 (Fig. 3) is pushed on the elevator 141 which successively will raise the same cartridge to the position wanted leaning against the top 142 of the back lug 22 of the sleeve 19 already described (Fig. 12).

From the above it may be remarked that by actioning one of the triggers, for instance the trigger 4 while the releasing of the percussion device is determined, and consequently the cartridge being in the barrel is fired the magazine is selected from which, immediately after the shot the new cartridge has to be taken by the elevator to replace the one fired. In the example mentioned, the trigger 4 by displacing towards the left the swinging and sliding member 114 causes the clearing of a cartridge 133 from the fore magazine 6, so that the subsequent shot (which may be fired at choice with the one or the other trigger 4—5) will be fired with the cartridge the shooter has preselected by firing the preceding shot If instead to introduce into the barrel a cartridge of the fore magazine the shooter had wanted to send into the barrel a cartridge of the back magazine he should have fired the first shot by pulling down the trigger 5, so that the swinging, sliding member 114 would have been displaced towards right and the head 118 would have acted, by the interposition of the head 116, on the end 121 of the lever 122 and not on the end 119 of lever 128; in this case the lever 120 would have been stationary while the lever 122 would have swinged in the right-hand sense around its own pivot 143 producing the lowering of the transversal lug 129 and conseqnently the admission of a cartridge 130 from the back magazine 7 under the action of the relative spring 144 to the elevator 141.

In this way the result is obtained that at the instant of firing each shot according to whether the same shot is fired by pulling down one or the other of the two triggers 4 and 5, the magazine is simultaneously preselected from which by lowering down the transversal stopping lugs 129 and 132 a cartridge is conveyed to the elevator for the subsequent shot. Since in the fore magazine 6 there may be disposed cartridges of a certain type for instance of fine lead and in the back magazine 7 there may be arranged cartridges of another type for instance of thick lead, the shooter has the possibility of varying in a practically instantaneous way the kind of cartridge he has to fire, this variation implying obviously the necessary discharge of the preceding cartridge, that is of the cartridge which is already in the barrel.

When the cartridges of a magazine are ended, in order to avoid that the feeding of the arm should cease owing to the actioning of the trigger selecting such a magazine, there is provided according to the invention a member sensible to the presence of cartridges in the magazine, which as soon as the magazine is empty, causes the movements of the levers 120 and 122 to be solidary to each other so that the lowering of the one produces the lowering also of the other and consequently in any case the feeding from one of the magazines, where are still cartridges, is secured. In the example here illustrated such a sensible member is only provided for the fore magazine but it is understood that the same member may be provided also only for the back magazine as for both the magazines in a way easily to be determined by the expert who has to teach how to realize the present invention.

The sensible member for the fore magazine 6 is constituted by a finger 145 lightly projecting inside the magazine 6 through a slot 146 and is applied to a lever 147 fulcrumed in 148 on a vertical pivot whose back end 148 is turned downwards and engages a pawl 150 pivoted in 151 on the lever 122 and solidary to a lever 152 normally lodged within a longitudinal groove of the lever 122 but laterally projecting towards the left side of the gun, when the finger 145 under the action of a small spring 153 (fig. 4) penetrates more into the slot 146 owing to the want of cartridges in the fore magazine 6. The lever 152 is then displaced laterally in a position below the end 119 of the lever 128 so that this latter is stressed to be lowered, the member 114 being displaced towards the left, the end 119 causes the lowering of the lever 152 which entrains downwards the lever 122. Consequently the transversal stopping lugs 132 and 129 are simultaneously lowered and the cartridge 138 may advance from the back magazine under the action of its own spring 144.

In order to introduce the cartridges into the arm they are made to pass from the bottom through the lower opening 154, the elevator 141 being thus raised and the cartridge may be pushed by hand into one or the other of the magazines 6, 7.

The elevating moment is quite similar to the one of the usual automatic Browning rifles, that is comprising said blade-elevator 141 and a lateral stop 155 actioned on by the cartridges and externally the knob 156. When it is actioned by hand through the knob 156, the stop 155 has a greater oscillation than when it is actioned on

by the cartridges, consequently it stops with the tooth 157 (fig. 12) the elevator 141 in its upper position. In this case the pressing member 158 (fig. 12) actioned on by a spring 159 is interposed between the stop 155 and the wall 160 of the frame. To this end the rod 151 of the pressing member is provided with a reenforce 152. A simple pressure exercised from downward upward on the pressing member 158 releases the stop 155 (which swings around its own vertical axis 163) and causes it to snap, so that the elevator 141 returns to its position of rest under the action of its own spring 164. The preselecting device above described is completely lodged in the lateral chamber 165 (fig. 21) constituted by the left side 166 of the frame and by the closing lateral plate 8 slidably mounted within the guides 167 and 168.

A safety device comprises the knob 12 (Fig. 3) already mentioned controlling a sliding rod 169 whose fore end 170 cooperates with the posterior lug 171 of the swinging lever 56, preventing the lowering of the same lever when the knob 12 is in a retreated position and allowing said lowering when the same knob 12 is in an advanced position.

The present invention has been illustrated and described in some preferred forms of realisation, but it is understood that numerous constructive changes may be into the examples cited without surpassing the limits of protection according to the present industrial patent.

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