





# UNITED STATES PATENT OFFICE.

ANDREW BURGESS, OF OWEGO, NEW YORK.

## AUTOMATIC GUN.

No. 821,922.

Specification of Letters Patent.

Patented May 29, 1906.

Application filed November 4, 1904. Serial No. 231,424.

*To all whom it may concern:*

Be it known that I, ANDREW BURGESS, a citizen of the United States, residing at Owego, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Automatic Guns, of which the following is a specification.

This invention relates to automatic firearms.

15 The object of the invention is to produce a compact and simple gun. A pistol is illustrated; but the invention is applicable to other firearms.

20 The invention consists in a construction whereby a breech-pin and sliding casing may be easily assembled with a frame and fixed barrel; also, in the combination with a reciprocating breech of an inertia-brake or retarder; also, in improved constructions and combinations whereby the firing of the weapon is accomplished; also, in details hereinafter described and claimed.

25 Figure 1 is a side elevation of a pistol involving this invention, part of the frame being broken away. Fig. 2 is a vertical longitudinal section showing the inertia-brake slightly modified. Fig. 3 is a broken longitudinal section of Fig. 1, parts being omitted. Fig. 4 is a cross-section on line *x x* of Fig. 3 looking toward the front of the firearm.

30 The numeral 1 indicates the frame of the firearm, and 2 the barrel, which is rigid with said frame, being preferably attached by the screw-thread 3. The casing 4 is a shell of a generally cylindrical form, but is cut away at its under side along its rear portion to a width which will pass the reduced portion of the barrel. The breech-piece 5 is rigid with the casing 4 and may either be integral there-  
40 with, as shown in Fig. 2, or may be attached thereto by suitable coupling means, as in Fig. 3.

45 The breech-closing spring 6 surrounds the barrel and has its bearings against a shoulder on the barrel at its rear end and against the intumed front end of the casing. In assembling the spring 6 is passed over the barrel, and then the casing is slightly tilted and its intumed end passed over the barrel until  
50 the breech-piece 5 passes the breech of the barrel, when the breech-piece is swung down, so that it comes behind the barrel, and brake-piece 10, when attached, will confine it from rising. Then a backward movement of the  
55 breech-piece 5 in the housing 8 draws back

the casing 4 with it and compresses the spring 6. The slot or cut-away portion of the casing permits this backward movement, the frame being notched or grooved, as at 7, to correspond.

60 This firearm uses a box-magazine in the stock and ejects the shells through an opening in the right side of the frame. Such constructions being well known are not herein described or illustrated. The cartridge is lifted into the span between the breech-piece 5 and the barrel when the breech-piece is thrown back by the recoil, as usual in this class of firearms.

70 The inertia brake-piece or retarder 10 is pivoted to the housing 8 by pin 11, as shown in Figs. 1, 3, and 4, the top of the housing being slotted longitudinally or cut away at its rear part. The inertia brake-piece 10 has a projection 12 extending down into the path of the breech-piece 5. This projection 12 is inclined at its front and rear ends. When the breech-piece recoils, it must throw down the heavy rear end of the inertia-piece 10 against the resistance of spring 15, said piece turning on pivot 11. As the breech-piece moves still farther back its upper corner encounters the incline 60 on the depressed inertia-piece and lifts it, the depression 13 in the breech-piece at that time having obtained position for receiving the projection 12 of the inertia-piece. The forward movement of the breech-piece again depresses the rear end or long arm of inertia-piece 10 by the engagement of depression 13 in the breech-piece with projection 12 on the forward short end of the inertia-piece, thus again retarding the forward movement of the breech-piece, so that more time is given for the cartridge-feed. The mainspring 15 bears against an intumed end 21 of the hammer 20 and against a suitable support on the inertia-piece behind and below the pivot 11. The mainspring thus has a tendency to lift the rear end of the inertia-piece, as well as to force the hammer forward. The hammer 20 has a thumb-piece 53 and a head 21, against which the mainspring bears, as explained, and also has a bar 22 with offset around the magazine and extending forward. When the hammer is cocked, either by hand by a backward pull or by the recoil of the breech-piece 5, the sear 25 swings up in front of bar 22 to hold the hammer cocked. Sear 25 is pivoted at 26 and pressed up by spring 27.



A dog 28 is pivoted to the sear in rear of pivot 26 and has an arm 29, which is pressed up by spring 30, which spring bears on the sear and dog. The trigger 33 is pressed by spring 34 into engagement with the hooked end of dog 28, the end of said dog being inclined to let the nose of the trigger ride past. When so engaged, a pull on the trigger draws on dog 28, thus depressing sear 25 and releasing the hammer. As the hammer slides forward under impulse of the mainspring 15 the projection 23 strikes arm 29 of dog 28 and knocks the hooked end of said dog away from the trigger. The sear is then free to rise and engage the hammer and will do so when the hammer comes back whether the trigger is released or not. When the pull on the trigger is relieved, its front arm rises and again hooks into engagement with the sear-dog. The firing-pin 36 is located in the breech-piece, as is very common, and operates as usual. A grip-piece 40 is pivoted to the frame near the lower part of the stock and is pressed outward by spring 41. A safety-catch 42 is pivoted to the frame and is also loosely pivoted to recoil-shield 40. The head of the hammer 20 is so formed as to ride over catch 42 when the hammer is cocked; but the spring-pressed recoil-piece 40 turns catch 42 to position to detain the hammer in cocked position, except when piece 40 is pressed in, as by a grip of the hand, when catch 42 is turned down out of the way of the hammer and ceases to act as a detent therefor.

In the modification shown in Fig. 2 the inertia-piece 50 is pivoted at 51 and its heavy end extends forward instead of rearward, and its short arm brakes under the shell 52 of the frame. In other respects the operation is like that of the piece 10 described.

What I claim is—

1. The combination with a rigid barrel and frame, of a rigidly-connected breech-closing piece and barrel-casing, a spring to press the casing and breech-piece forward, a pivoted inertia-brake or retarder, and a spring acting to move the brake into the path of movement of the breech-piece. 45

2. The combination with the barrel and frame, a rearwardly-moving breech-piece, a pivoted brake acting on said breech-piece, a longitudinally-sliding hammer, and a spring bearing on said hammer and brake to operate both in opposite directions. 50

3. The combination with the barrel, frame, and rearwardly-moving breech-piece, of a brake-piece pivoted to the frame, and having a short arm acted on by the backwardly-moving breech-piece, a long arm which is thereby rocked into the path of movement of the breech-piece, said breech-piece having a depression into which the short arm of the brake is rocked, to retard the breech-closing movement. 55

4. In a firearm, a hammer, a sear pivoted in the frame, a trigger separately pivoted in the frame, a dog pivoted to the sear and having a hook with which the trigger engages and by which the sear is released from the hammer, said dog extending into the path of movement of the hammer and being released from the trigger by the striking movement of the hammer, all combined substantially as described. 60

In testimony whereof I affix my signature in presence of two witnesses. 75

ANDREW BURGESS.

Witnesses:

W. A. BARTLETT,  
E. H. PARKINS.