A.D. 1883, 14*th* FEBRUARY. N° 823.

SPECIFICATION

OF

FREDERICK BEESLEY.

FIREARMS.

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A.D. 1883, 14*th* FEBRUARY. N° 823.

Firearms.

LETTERS PATENT to Frederick Beesley of Queen Street, Edgware Road in the County of Middlesex, Gunmaker for an Invention of "IMPROVEMENTS IN FIREARMS"

PROVISIONAL SPECIFICATION left by the said Frederick Beesley at the Office of the Commissioners of Patents on the 14th February 1883.

FREDERICK BEESLEY of Queen Street, Edgware Road in the County of Middlesex, Gunmaker "IMPROVEMENTS IN FIREARMS."

The object of this invention is to utilize the explosion of the cartridge or its equivalent, or the recoil of the gun consequent on such explosion, for the purpose of automatically effecting the cocking of the hammer or its equivalent, ready for the next discharge.

In carrying my invention into effect I may use various arrangements of mechanism, but the following will serve as examples of means for practically carrying out my idea.

Thus a sliding steel bolt may be inserted through the back of the action into the chamber of the arm, the front end of the said bolt resting against the base of the cartridge when the arm is loaded, and the rear end against the breast of the cock or tumbler or against one side of a rocking lever which in its turn rests against the breast of the cock or tumbler when at rest. On the discharge of the arm, the base of the cartridge is driven backward against the steel bolt, which in its turn thrusts the rocking lever and that the breast of the cock or tumbler backwards, to full cock, where it is retained in position by the sear catching in the bent ready for the next discharge, while the steel bolt is carried forward by means of a spring and again rests against the base of the cartridge when the gun is again loaded.

Another method of attaining the same object is by having a second or false back to the action of the arm connected with the first, and suitably supported by sliding grooves and rods, which rods act against the cocks in the same manner as above described.

Another method of effecting the same purpose is by having a false or loose heelplate acting against sliding rods which traverse the whole length of the stock of the arm extending from the heel plate to the lock or locks (in one or more pieces). The front end rests against the bottom of the tumblers so that when the arm is discharged, the recoil causes the heel plate to be pressed in by the shoulder of the firer, which thrusting the sliding rods forward through the stock and against the lower sides of the tumblers raises them to full cock ready for the next discharge.

[*Price* 6*d.*]

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said Frederick Beesley in the Great Seal Patent Office on the 13th August 1883.

FREDERICK BEESLEY of Queen Street Edgware Road in the County of Middlesex Gun-Maker "IMPROVEMENTS IN FIREARMS"

The object of this Invention is to utilize the explosion of the cartridge or its equivalent, or the recoil of the gun consequent on such explosion, for the purpose of automatically effecting the cocking of the hammer, or its equivalent, ready for the next discharge.

In the accompanying Drawing, I have illustrated three different ways of carrying my invention into effect.—Fig: 1 is a partial side section of a break-down gun with bar action locks, fitted so that the recoil of the fire-arm against the shoulder of the firer may effect the cocking of the tumblers ready for the next discharge. Fig: 2 is a detail plan view of a portion of the mechanism shewn in Fig: 1— Fig: 3 is a partial sectional view of a gun with back action locks, fitted so that the recoil of the cartridge itself will raise the hammer to full cock ready for the next discharge. Fig: 4 is a side section of part of a bar action gun.—In this case the barrels are mounted on a sliding block or action which, together with the barrels, is thrust backwards upon the explosion of the cartridge and acting on a thrust rod or equivalent device, raises the hammer to full cock Figures 5 and 6 are transverse sectional views on the line *x. x.* of Fig: 4 as seen from the rear and front of the gun respectively.

Referring now to Fig: 1 A are the barrels pivotted at *a.* as usual, to the action B; the mechanism for locking the barrels is omitted for the sake of clearness, and may be of any suitable known kind.—C indicates the lock plate, one only being shown.—D is the tumbler or cock, which I form with a projecting spur E on its under or lower side. F is the main spring for actuating the tumbler in the usual way through the link G.—H is the bridle piece. I the sear, and J the sear spring.—K is a bolt sliding on the lock plate through the stud or guide block L, and through a projection in the lower side of the bridle H.

This bolt K has a shoulder *k.* on it, which is adapted to engage with the spur E on the tumbler, as shewn in the detail plan view Fig: 2, and cock the tumbler when the rod is thrust forwards. In order to prevent any interference with the tumbler while striking its blow on the firing pin or "striker" it is desirable to hold back the rod K and its shoulder *k.* and to this end I cause a tumbling lever M keyed onto a fulcrum or pivot pin, N, and upheld by a spring O, to engage with a notch on the extreme end of the rod K.

It will be understood that there are two levers, such as M, pivotted on the common transverse fulcrum pin or pivot N, and each upheld by a slight spring such as O. but the mechanism represented in the drawing refers to one barrel only.

The butt end of the stock is fitted with a loose heel plate P and, passing through the whole length of the stock, is a rod Q, bearing at its rear end against and secured to the loose heel-plate, and at its forward end against the bolt K, to which it is attached. The gun is represented in the drawing as on the point of being fired.

The action of the parts is as follows:—

Directly the trigger is pulled, the mainspring F forces the tumbler against the firing pin, and at the same moment dislodges the lever M from its bearing against the sliding bolt K. The bolt K is thus free to engage with the spur E through its

shoulder *k*. and bring the tumbler D to the cocked position, directly the force of the recoil has driven the fire-arm back against the shoulder of the firer, and the heel plate P has thrust forward the rod Q.

On removing the gun from the firing position, the springs R will force back the heelplate and rod, as well as the sliding bolt K, allowing the lever M to regain its position as shewn in the drawing and hold the bolt K clear of the tumbler, until the trigger is again discharged.—The loose heel plate may be either fitted with guides as shewn, or be hinged to the butt at one end or side.

This mode of applying the invention is also suitable for back action guns.

Referring now to Fig: 3, A are the barrels pivotted as usual to the action B; C is the lock plate, D the hammer or cock E the bridle piece, F the sear, and G the mainspring.

H represents a cartridge in the chamber of the barrel ready for firing. It will be perceived that the chamber of the gun is cut deeper than usual to allow the cartridge to pass further forward into the barrels and leave a space H^1 between the base of the cartridge and the breech face of the action Fitted so as to project into this space is a plunger or bolt I, adapted to play through the back of the action, and having its rear end bearing against a tumbling lever or lifter J. which hangs in front of the hammer D as shewn On the discharge of the gun taking place, the cartridge will be driven backwards against the bolt I, which acting through the lever J against the breast of the hammer, will cause the said hammer to be raised to full cock ready for the next discharge. On opening the gun to remove the spent cartridge the plunger or bolt I will be brought forward into its place, as shewn, by the spring K.

If desired, the bolt I may be made larger to allow the striker or firing pin L to pass through it, and in that case the lever J would require to be pivotted over the "striker," instead of under it as shewn in the drawing.

In this Figure, M is a stop piece projecting from the side plate C, and adapted to receive and check the hammer or cock D, when it is thrust back to the cocking position by the recoil of the cartridge acting upon it through the plunger or bolt I and lever J.

In this arrangement of mechanism I preferably adapt to the lever J, or hammer D, a small externally projecting hand lever, whereby the hammer may be cocked in the event of a miss fire.

This system is equally applicable to a bar action lock. Fig: 4 represents part of a bar action gun in side section. Fig: 5 is a section on the line *x x*. of Fig: 4, looking towards the front; and Fig: 6 is a section on the same line, looking towards the rear of the gun.

A A are the barrels. B is a block forming part of the action, to which the barrels A A are hinged and locked in the usual way. In Fig: 4 of the Drawing, the locking lever *b* is indicated.

The block B is shaped or cut away in a manner similar to the action known as a "skeleton bar action," and is fitted to slide to a limited extent within an outer case or action B^1, which latter is attached to the stock and trigger-plate in the usual manner.

D is the tumbler or hammer, F the sear, G the sear spring.

H is a bolt screwed into the sliding block B, and extending rearwards through holes in the front part of B^1. so as to bear against the breast of the hammer D.—I is a tumbler or lever keyed on a pivot J. passing transversely across the action to a corresponding lever or tumbler on the other side.

The front end of this lever, when in its normal position rests against a solid part of the block B, and prevents the two parts B and B^1. coming together.

Its rear end underlies the breast of the hammer D At the moment of discharge the cock D will depress the rear end of the lever I, and bring its front end opposite a recess K formed in the block B, thus allowing the barrels A A and block B to slide backwards in the case B^1 in doing which the bolt H will be thrust against the breast of the tumbler D, and lift it to full cock ready for the next discharge.

L. L. indicate two spiral springs for thrusting the barrels A. A with their sliding block B, away from the case B^1 after the discharge, thereby allowing the lever I to fall into its locking position as shewn in the Drawing.

Small nuts or cross pins on or through the bolt H may be used to limit the extent of forward movement of the block B within the case B^1.

The blocks B and B^1 are formed to interlock as shewn at M, Fig: 6 and a central guide bolt O (Fig: 4) may also be used to maintain the parallelism of the parts.

The above indicate some of the modes of applying my invention to fire-arms, but it is obvious that the same result, *viz*: the cocking of the hammer or its equivalent by the recoil of the gun or the explosion of the cartridge, may be effected in many other ways.

In break-down guns fitted with this Invention, no more force will be required to open and close the gun than is required to open or shut the ordinary locking device, the extra force usually required to be expended in forcing the hammers back in opening or closing the gun, being thereby saved, and the cocking being automatically effected by the recoil of the gun or a part of the gun on its discharge, or by the direct impact of the cartridge itself when exploded upon the cocking mechanism.

The means above described are applicable with but trifling modifications to all small fire arms.

Having thus described the nature of my said Invention of "Improvements in Firearms" and explained in what manner the same may be carried into effect I wish it to be understood that I claim:

First:—Utilizing the explosion of the cartridge or its equivalent, or the recoil of the gun, or a part of the gun, consequent on such explosion, for the purpose of automatically cocking the hammer or its equivalent ready for the next discharge substantially as set forth.

Secondly The several arrangements of mechanism described with reference to the accompanying Drawing, whereby the automatic cocking of the hammer or its equivalent is effected immediately upon the discharge of the gun.

In witness whereof I the said Frederick Beesley have hereunto set my hand and seal the tenth. day of August in the year of our Lord One thousand eight hundred and eighty three.

FRED^{CK} BEESLEY. (L.S.)

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