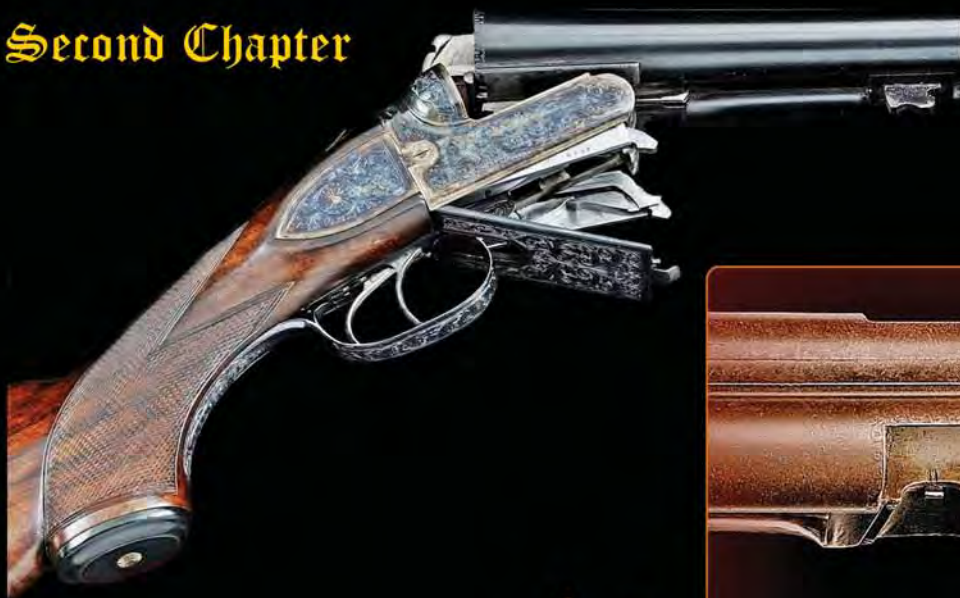


Second Chapter

English hunting guns second part



Paolo Tebaldi. November 2018



*From J. Needham
to the perfect side by side*



WWW.STENIRON.COM

Three paths were followed to put the hammers inside the body.
In 1871 Murcott put them on the sideplates' inner face.
Gibbs & Pitt in 1873 placed them on the triggers' plate.
In 1875 Anson & Deeley inserted the hammers inside the body.



T. Murcott

Gibbs & Pitt

Anson & Deeley

1852. JOSEPH NEEDHAM

Needham was inspired by von Dreyse' gun and cartridge to build this side by side, it can be explained only considering it the conversion to breech-loading of a percussion cap double gun. The assumption is confirmed by the structure of the gun (Fig. 2) and by the fact that the useful length of the barrels is only 25,8 inches.

This gun is loaded by turning the finger-piece towards the top of the barrel and pulling outward the "action" or breech-block pivoted vertically upon its pin.

The English Needham reminds to the French Robert, both of them conceived a gun which, being cocked with the opening, doesn't need the hammers.

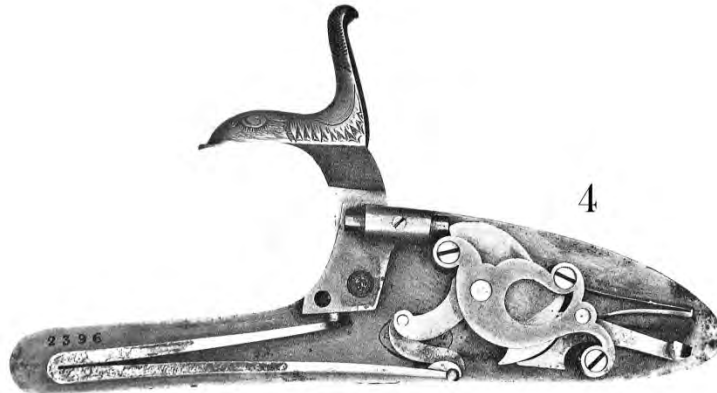




THE SIDE BY SIDE WITH “FOUR” HAMMERS

In the 1860s, the centrefire cartridge came alongside the pinfire one. So the English gunmakers, even continuing in the development of the hammer gun, remembered the mechanism that Pauly realized fifty years earlier; with its “internal” hammers it is the most appropriate to hit a striker that works better if perpendicular to the ignition, this one now placed in the centre of the cartridge’s bottom. Fig. 1 & 2)- Gun made in 1865 approx. The tumbler works as an hammer and the restyled external part is a cocking lever.

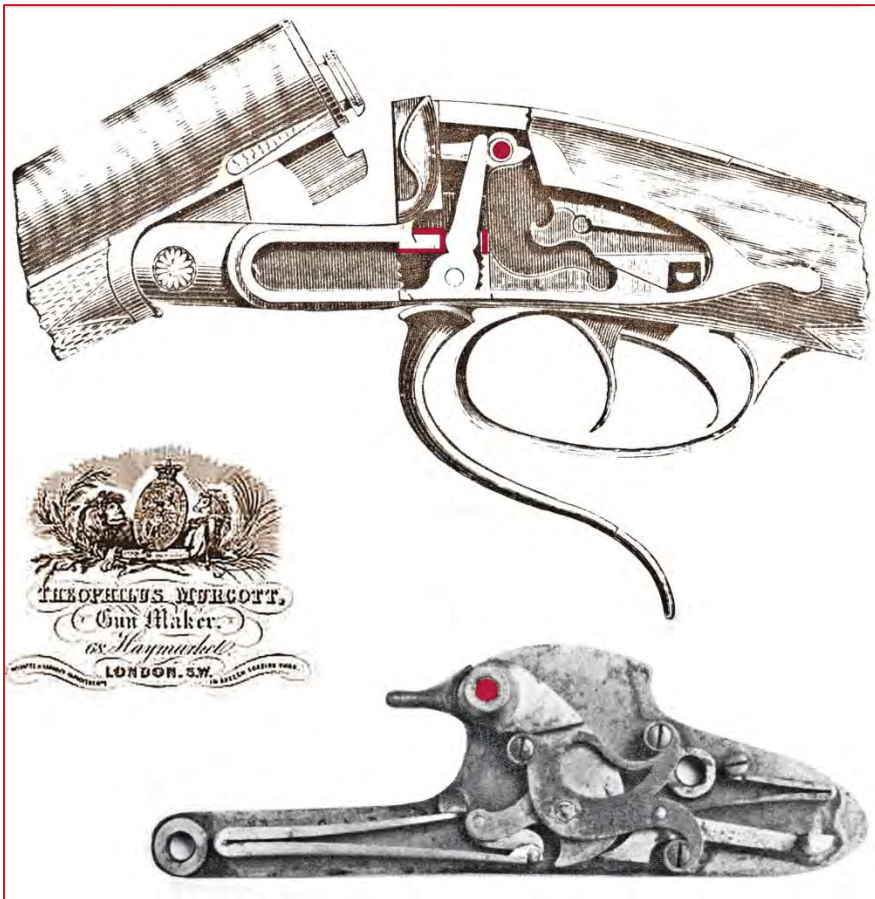
Fig. 4)- Other guns, born pinfire, were modified to shoot both pinfire and centrefire cartridges. For some time it’s been also produced a cartridge with both the ignition systems (Fig. 3).



In the 1870s and 1880s, for the customers who felt disoriented with the hammerless, the gunmakers made guns with hammers that are only cocking indicators, as they rotate together with the tumblers (Fig. 5 and 6).

1871. Theophilus MURCOTT





THE HAMMERLESS

In 1871 Theophilus Murcott introduced the first hammerless gun, without external levers. To cock the tumblers he studied a lever with its fulcrum before the triggers' guard and linked to the bolt. The rotation of this lever opens the gun and cocks it too. The sidelock hammerless was born.

Hunters felt perplexed about the new development, but gunmakers immediately understood its significance.

So they started a contest and the prize was to create the best side by side, of course it had to be unmistakable and better than the others.

Ability and effort were at the highest level and it took less than ten years to switch from the hammerless made by Murcott to the Purdey' self-opening ejector gun.



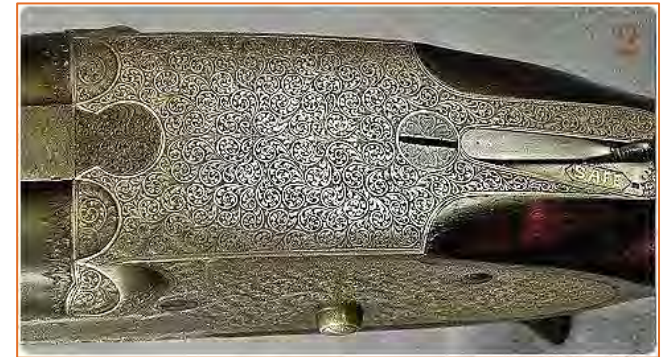


Woodward The Automatic

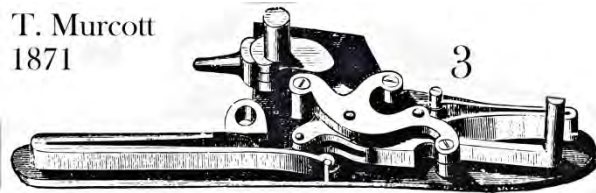
The Automatic made by Woodward was the first outstanding result of gunmakers' commitment; clearly inspired by the Murcott's one, it has the same opening and cocking system.

Notwithstanding Murcott, who was the inventor, it should be recognised that the Woodward gun is at a higher level.

The lock (Fig. 5) is enough, supreme example of how to move the hammer on the other face of the sideplate, without breaking the rules governing the proper functioning of the mechanism.



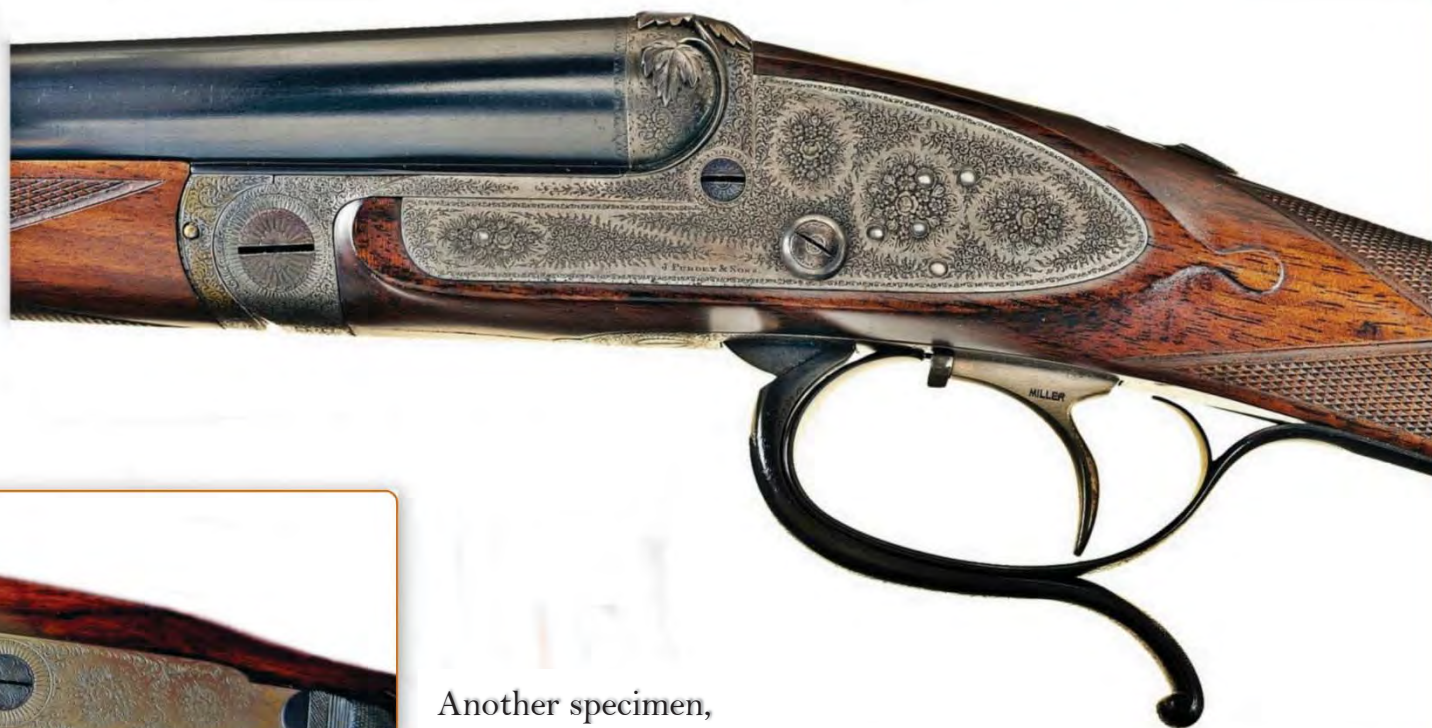
T. Murcott
1871





Purdey-Woodward Southgate Ejector

The side by side
formerly made by
Murcott, then by
Woodward, raised to an
unmatched level.



Another specimen,
with a slightly
different engraving.

HOW TO COCK THE HAMMERLESS

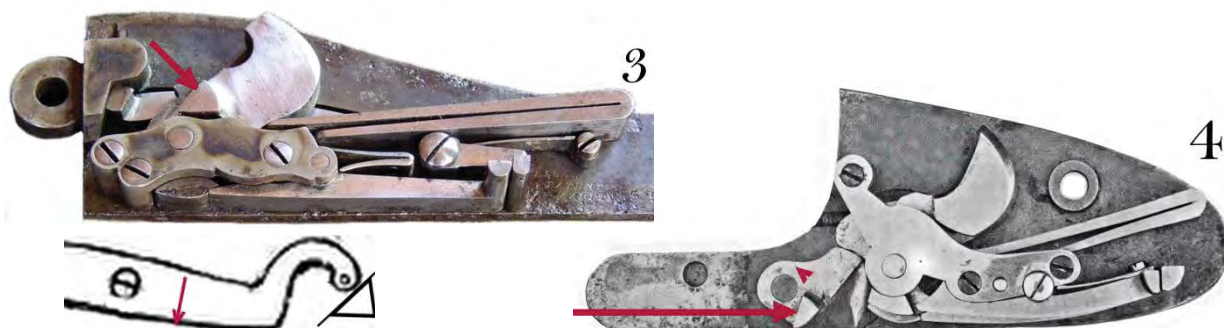
The first sidelock hammerless guns were almost always cocked by the rotation of the opening lever (Fig. 1 and 2). To be noted that the second lock, made for an express rifle, is a back action one.

Starting with the gun made by Scott in 1878 the cocking will be done by the rotation of the barrels.

(Fig. 3) – The tumbler is pushed by an internal lever working top-down.

(Fig. 4) - A cam, moved by a lever linked to the barrels, cocks the tumbler.

(Fig. 5) – From the 1880s the bottom-up lever imposed itself. It is the most practical way to link the tumbler to the rotation of the barrels and to operate of the ejectors.



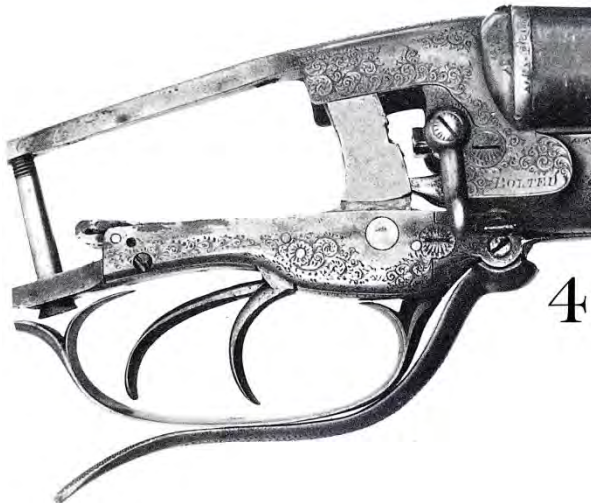
1873. George GIBBS & Thomas PITT



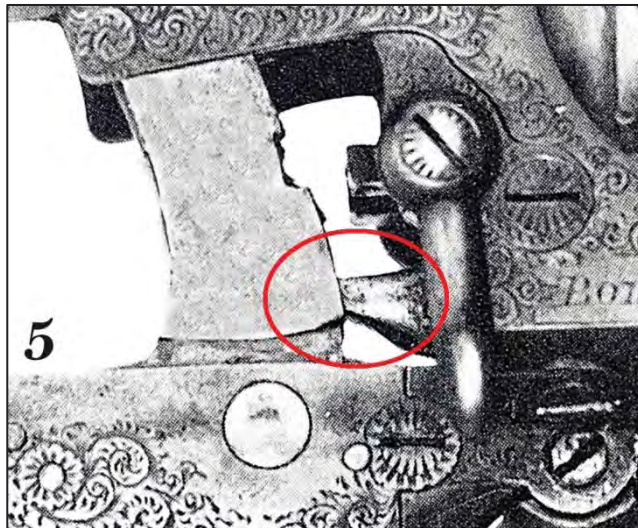


Tumbler, sear, spring. Less than this is not possible and it explains the luck of the lock mounted on the triggers' plate, that Gibbs & Pitt patented in 1873.

Fig. 4 and 5 – It is the bolt, moved backward by the opening lever, that cocks the tumblers.



THE LOCK ON THE TRIGGERS' PLATE

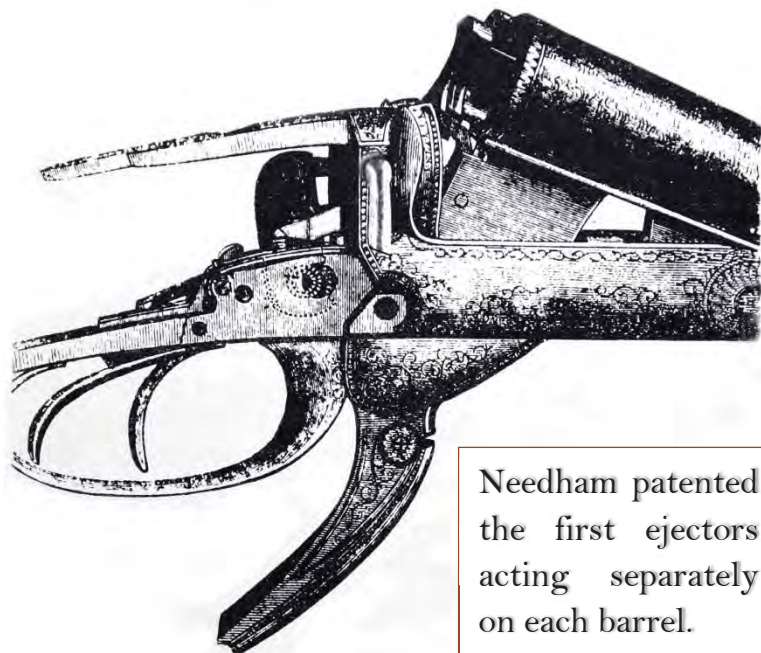


A lock on the triggers' plate is less expensive to build if compared to a pair of sidelocks that, moreover, have to be inserted in the body and embedded into the wood.

The lock and the triggers are also based in the same structure, this considerably reduces the times needed for the adjustment. The gun industry will widely use this mechanism, improving it, making it suitable for the single barrel gun, for the O/Us and for the range, making it hand detachable too.



1874. THE JOSEPH NEEDHAM EJECTOR



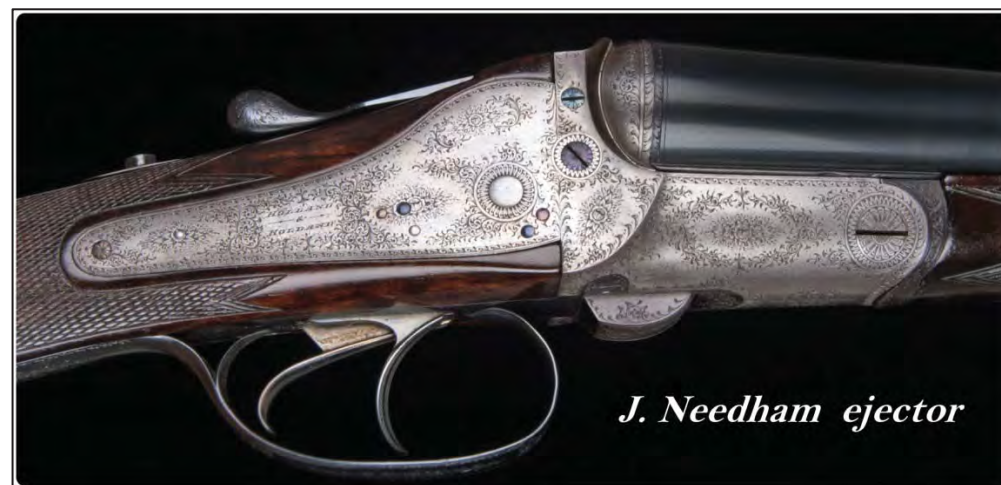
Needham patented the first ejectors acting separately on each barrel.



Fig. 2 – Right tumbler uncocked – On the tumbler (1) there is the striker (2) and another protruding arm (3). The right gavel (4), inserted in the rear lump, protrudes from its place when it is cocked (5).

5 is touched by 3 due to the rotation of the opening barrels. Then 4, that's charged by a spring, is released and pushes out the ejector (6).

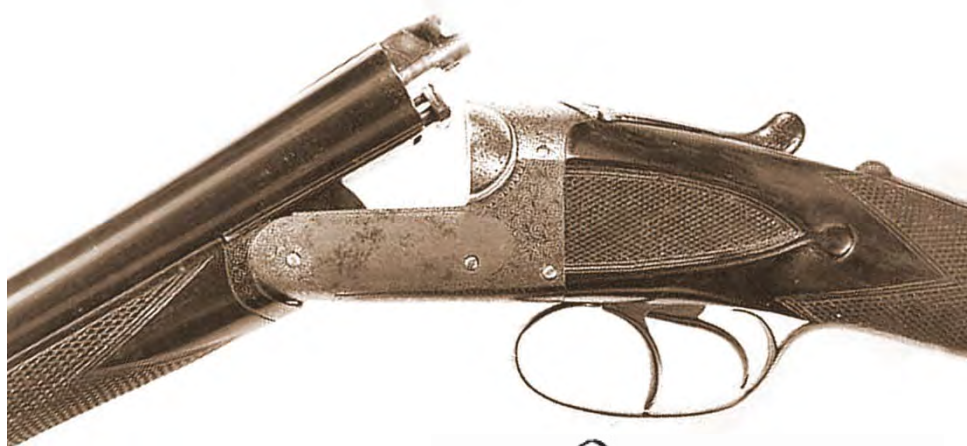
While closing the barrels, the ejector returns in its seat and the mechanism is recharged.



J. Needham ejector

1875. Westley Richards
ANSON & DEELEY



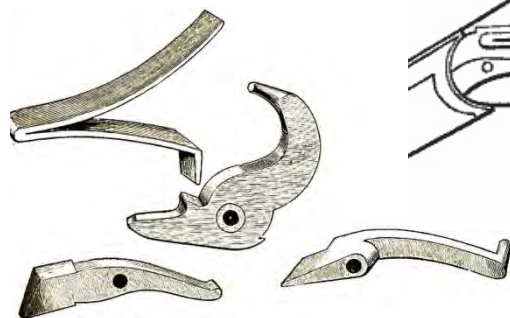
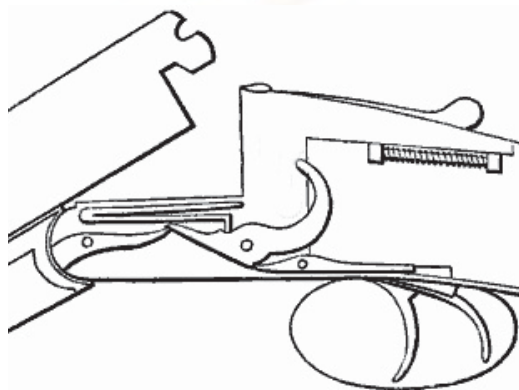


THE LOCKS WITHIN THE BODY

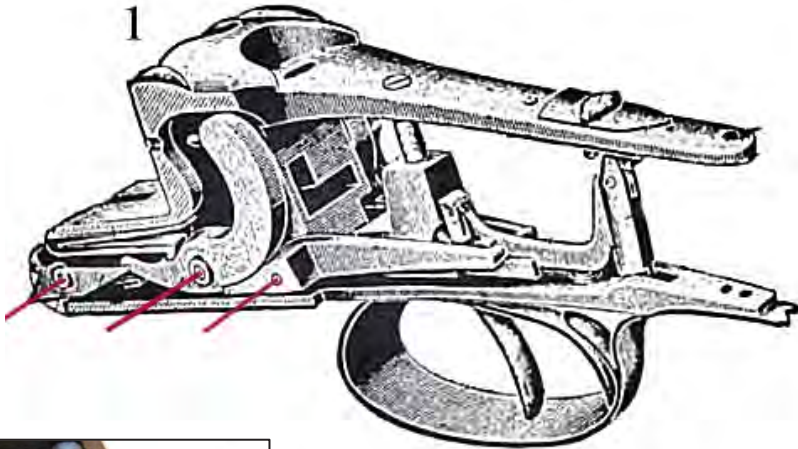
The Westley Richards' closing system, together with two robust locks, which are not on the sides but inside the receiver and are cocked by the opening of the barrels. This is the substance of the creature, never seen before, that William Anson and John Deeley patented in 1875.

This gun is often criticised by those who don't want to admit that if lacking in a certain situation, it can be optimal in another one. Evaluating two opposite situations, it is true that some characteristics of the Anson make it not suitable for the range, but it is also true that only Hercules loves to hunt in the mountains with a gun that weighs more than 8 pounds.

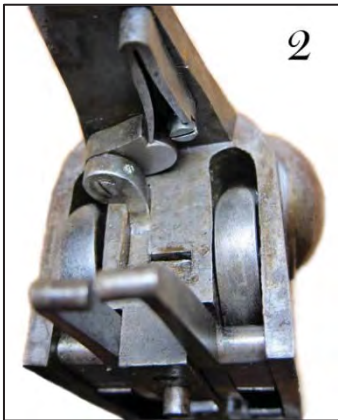
If we consider the human soul indeed, we are inclined to assume that the only fault of a finely built Anson gun, is to be cheaper than a sidelock with the same overall quality.



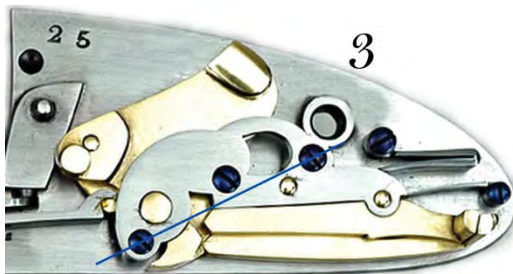
1



2



3



4



5



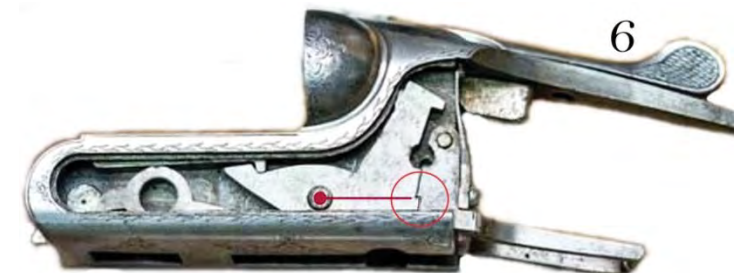
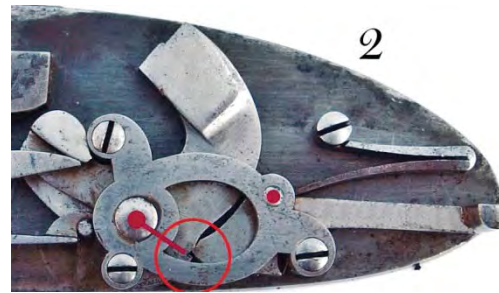
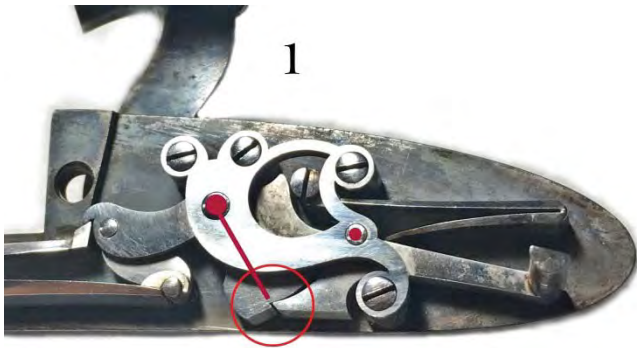
A COUPLE OF BORING PAGES

The Anson & Deeley lock works between two walls, machined from the solid of the body, they are unshakeable support to the cocking levers' pins, to the tumbler and sear (Fig. 1 and 2).

On the sidelock indeed, a wall (the bridle) is removable and fixed to the other one with screws. One side of the tumbler's pin and of the sears' pin is therefore supported by a structure that may loosen when shooting, especially if the screws are almost aligned (Fig. 3).

The gunmakers of the past knew this problem and they cased the locks with the highest precision, so that the wood surrounded the bridle and helped to keep it still (Fig. 4). A more recent solutions is the one to block each screw with a tiny counter screw, in this way the embedding can be more expeditious.

The same strength and simplicity of the Anson' lock has been reached with the sidelock on which tumbler and sear rotate around pins that are machined from solid (Fig. 5).



The strength used to free a cocked tumbler depends on the work of the swivel, on the position of the sear's pin and on the distance between the shooting notch and the tumbler's pin. The bigger is this distance, the lighter will be the shooting.

The hammer bar-action sidelock (Fig. 1) is exemplary also in this respect.

Fig. 2 – To put the “hammer” on the inner side of the sideplate, it is necessary to put the tumbler's pin in a low position so that the distance from the shooting notch is strongly reduced. The good positioning of the swivel and of the sear's pin solves this problem.

In a Anson & Deeley' lock (Fig. 3), the shooting notch, which is close to the tumbler's pin, is pushed against the sear by the force of the mainspring at its maximum. For this reason the Anson' lock has to be built and adjusted with wisdom. The great gunmaker, putting the right spring in the right place together with the tumbler, adjusting the sear's length (Fig. 4) and giving the right inclination to the notch, is able to obtain a perfectly working lock. I believe that the bad name is due to the countless Anson' guns made in the XXth century with a good appearance, but with no substance.

Fig. 5 and 6 – We will see, then, how the continental gunmakers will move the sear's pin to obtain an easier adjustment.

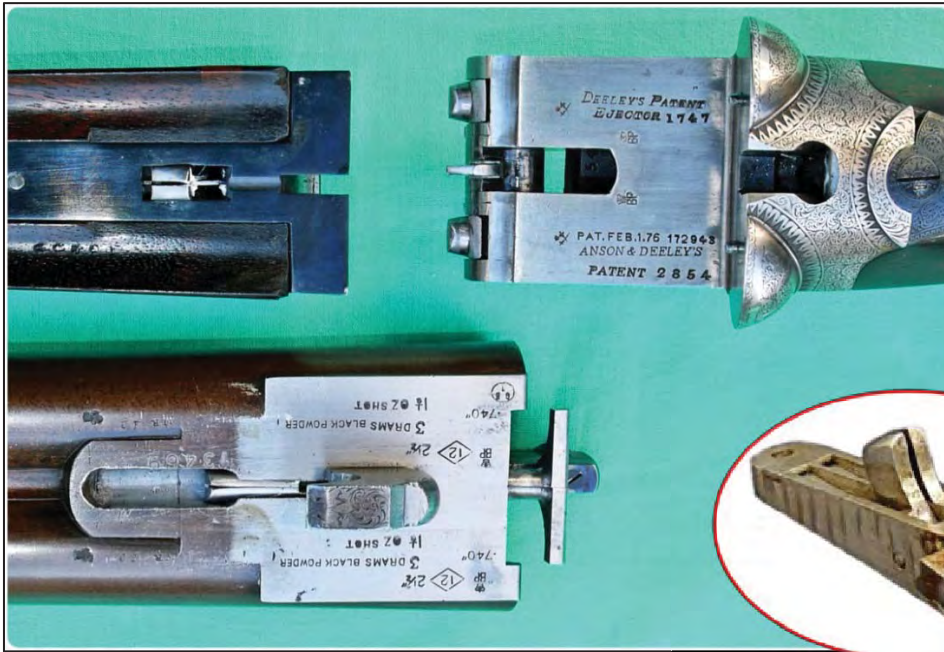


Fig. 1 – The Deeley' ejector.

Fig. 2 – The Webley' safety sear made for the Anson & Deeley.

Fig. 3 – The rear lump is moved from the doll's head extension to the flats of the barrels.

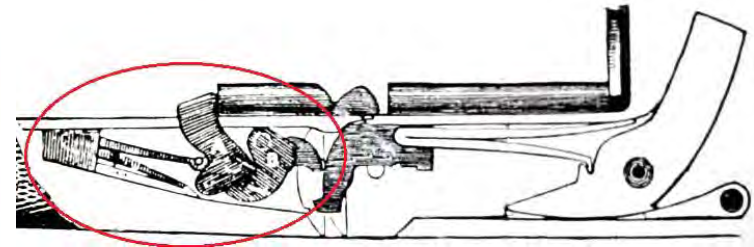
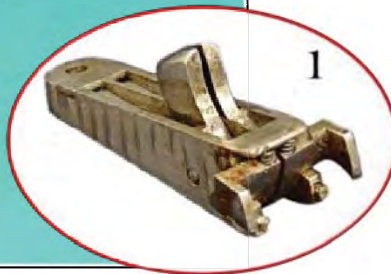
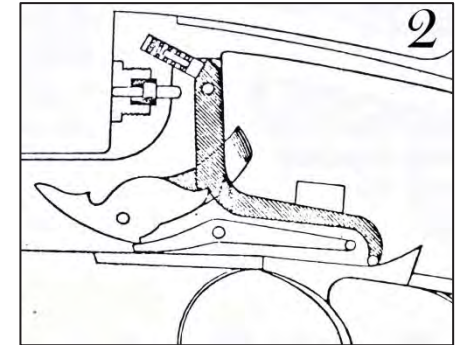


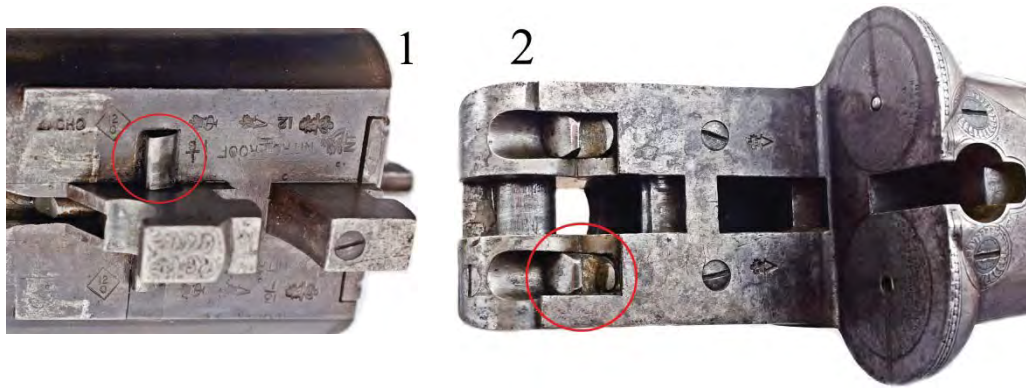
Fig. 4 – 1897. The droplock.

Fig. 5 – The single trigger made in 1903.



1878. W. & C. SCOTT





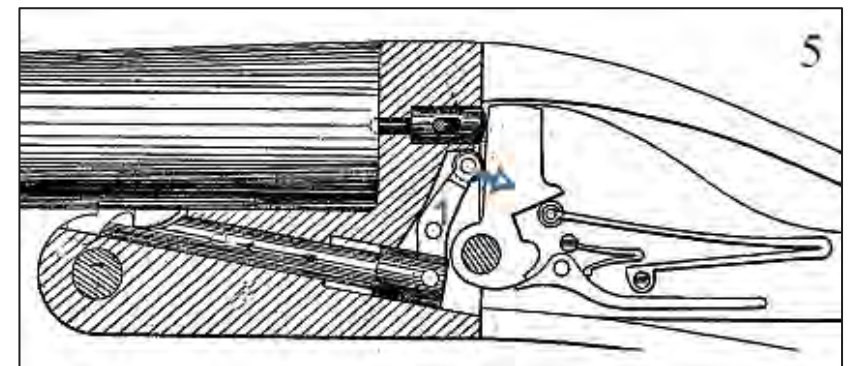
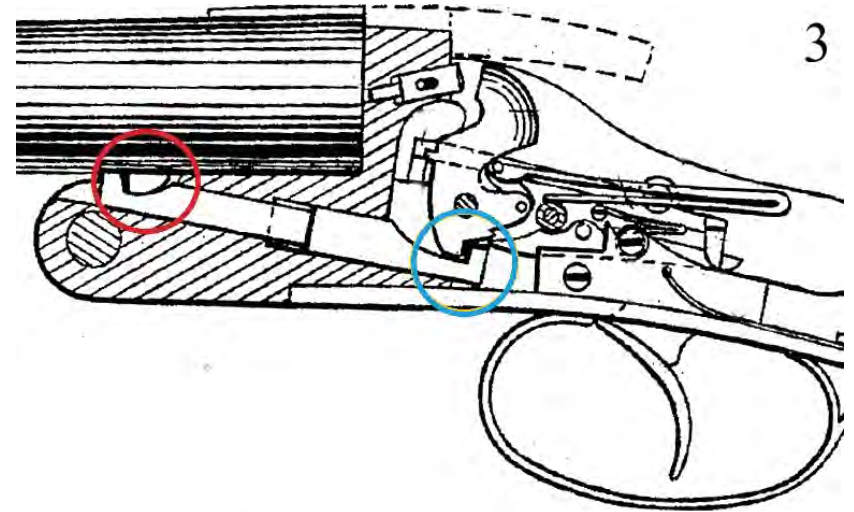
To put W. Anson and J. Deeley among the greatest gunmakers it would be enough to consider that their gun, and first and foremost, is cocked by the rotation of the opening barrels. A rational system, because barrels are a powerful lever, and practical too, it will become the rule for the hammerless guns.

The first sidelock gun built according with this principle was the W. & C. Scott made in 1878.

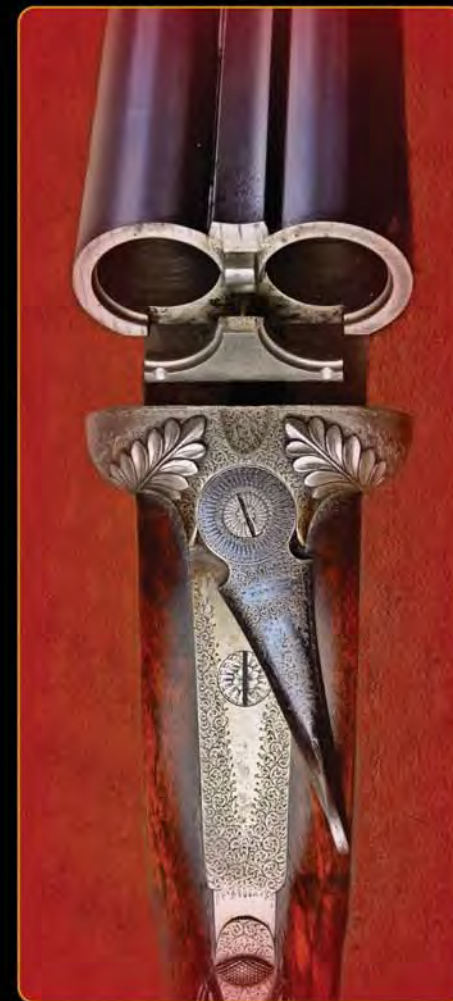
With the rotation of the barrels the two prominences on the flats (Fig. 1) pull two levers (Fig. 2) which hook the tumblers and cock them (Fig. 3 and 4). Closing the gun the two levers are pushed back in their seat.

This mechanism, maybe quickly designed, revealed to be sluggish and was revised several times, adopting solutions that allowed to strengthen the lock too; in fact in this first version it had a quite unstable bridle. About the very low position of the sear's pin there is no remedy; it is a congenital defect on these first back action sidelocks.

Fig. 5 – One of the changes made to 1878' mechanics. The tumbler is cocked by the rotation of an arm (1) linked to the lever.



1880. The PURDEY - BEESLEY mechanics



At the end of the 1870s Frederick Beesley developed an unusual mechanics, it uses the strength of the mainspring to open the barrels. It is the mechanism that Purdey uses since 1880.

In simple words: only a part of the mainspring's energy is used to kick the tumbler; the remaining energy is used to rotate the barrels when the opening lever is moved.

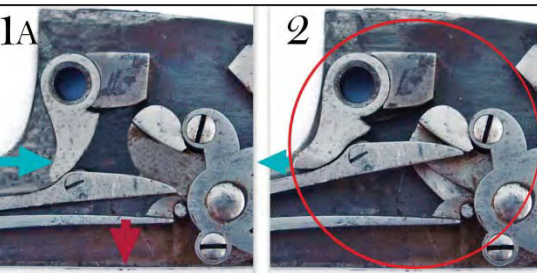
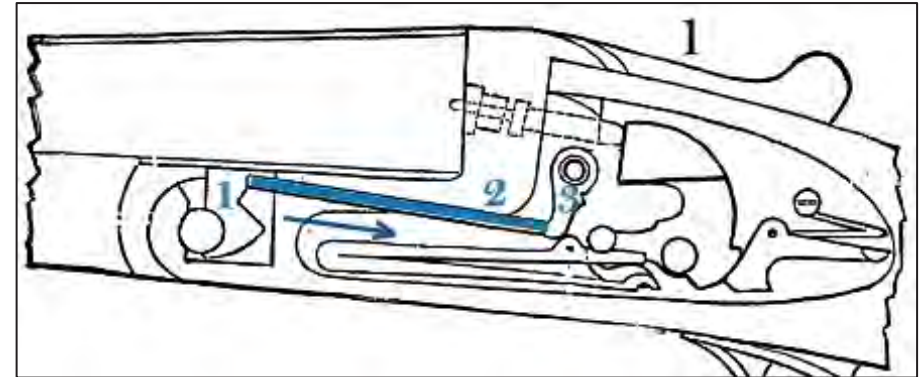


Fig. 1A - The gun is closed. The fully compressed mainspring gives energy to the tumbler.

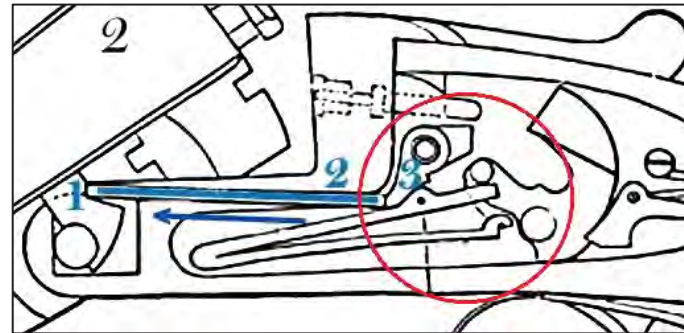
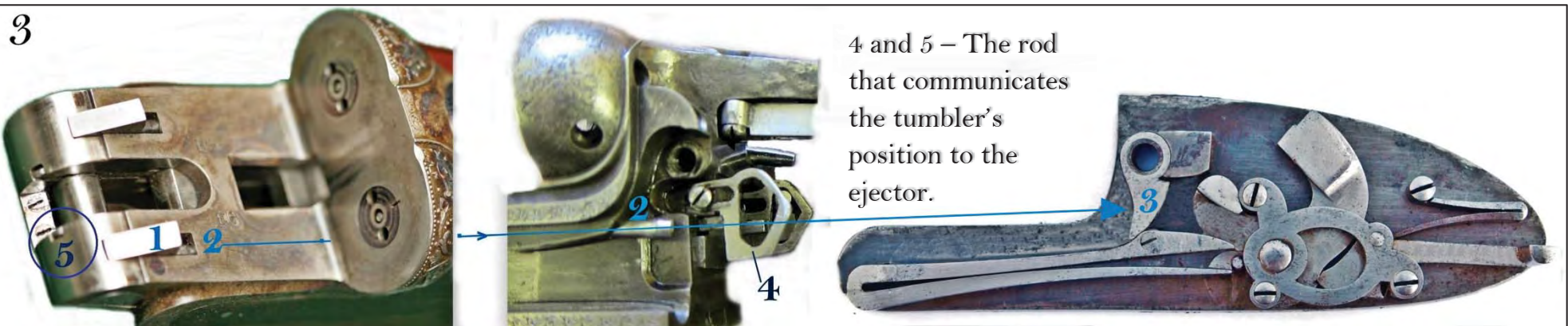


Fig. 1 - The gun is closed. The cam 3 pushes the upper arm of the mainspring.
Fig. 2 - Moving the opening lever, 3 can be free and, through 2 and 1, it opens the barrels. The upper arm of the mainspring cocks the tumbler.



Fig. 3 - Closing the barrels the rotation of 1 moves 2 backward, so 2 pushes 3 and compresses the mainspring. The tumbler is ready to shoot.



4 and 5 - The rod that communicates the tumbler's position to the ejector.

THE NEED FOR THE SELF-OPENING



The game flies numerous and fast above the head of the hunters because disturbed by the beaters. The hunter shoots then passes the gun to the loader who gives him the twin already loaded and soon reloads the other one.

Nothing better than a pair of self-opening ejector guns, according to the Anglo-Saxon judgement, to practice this kind of shooting and the Beesley-Purdey gun was crowned queen.

Other gunmakers studied similar mechanics and, dating from the 1880s, some of them built guns with a more or less assisted opening.

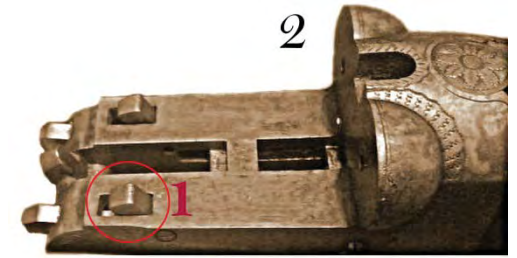
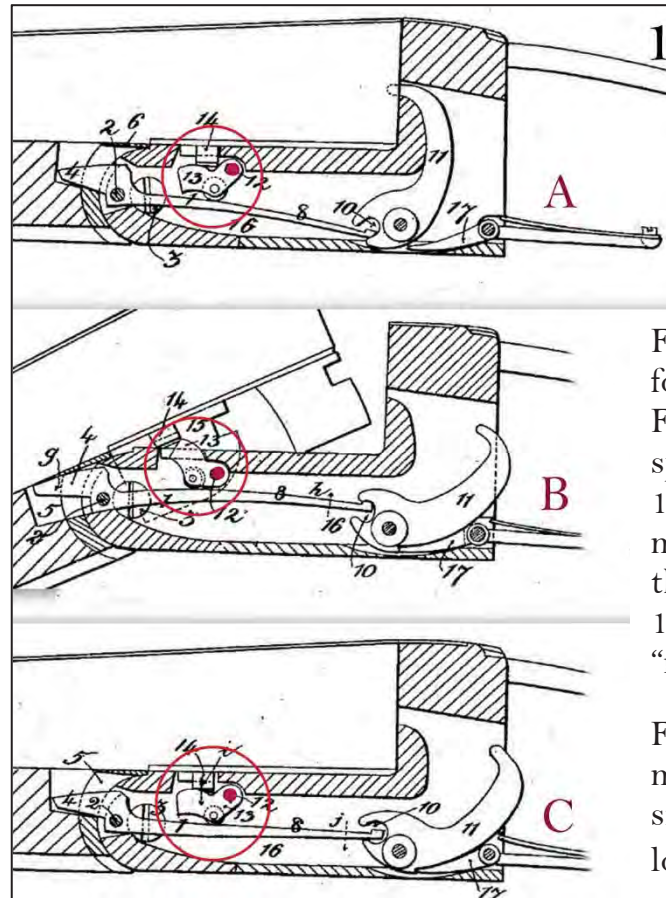
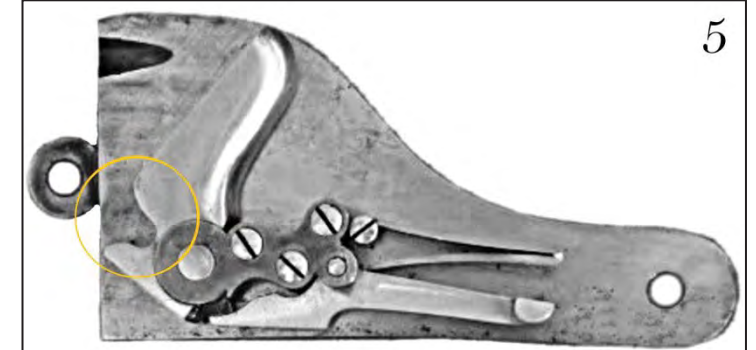
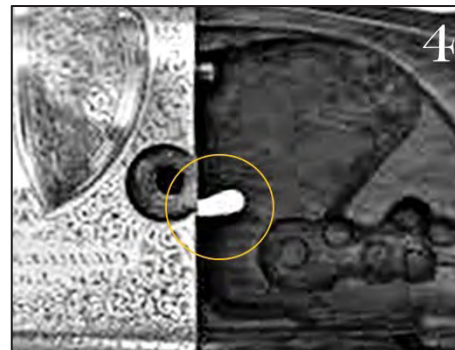


Fig. 1 and 2 – 1884 F. Beesley patent for a boxlock side by side.

Fig. 1A – Gun uncocked. The leaf spring is compressed by the cam (O). 1B – Opening the lever the spring makes the barrels rotate and cocks the tumbler.

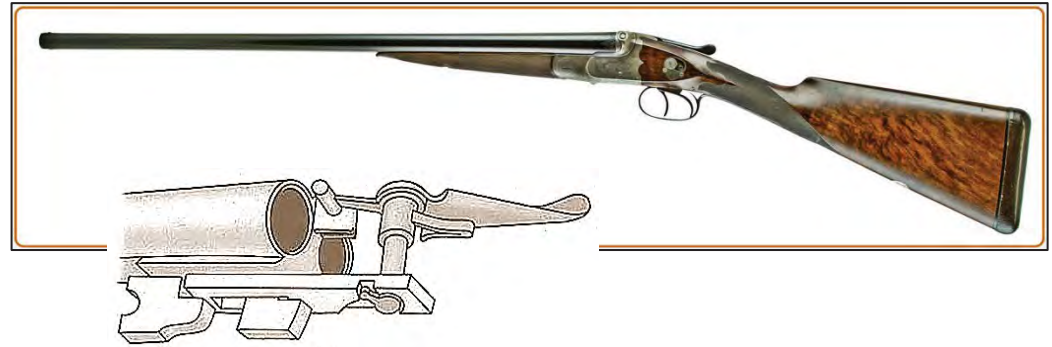
1C – Closing the barrels the cam “reload” the tumbler’s spring.

Fig. 3, 4 and 5 – The same mechanism applied to a sidelock gun signed by Charles Lancaster. The lock is astonishing.



1880

W.W. GREENER FACILE PRINCEPS

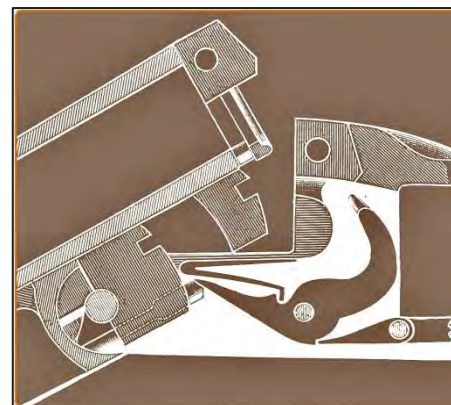


Greener used to build the Anson & Deeley side by side under license, then he modified the project and created a different gun.

He realized a different cocking system, which allowed him to give a neater shape to the action, tapered near the hinge pin.

Of course he replaced the Westley Rychards' closing system with his own one. In addition to this it is also necessary to add the very high quality level of the more expensive versions.

Thus the Facile Princeps isn't an Anson & Deeley: if two guns differ on the cocking system, on the lumps and on the closing system, the only thing that remains the same is that they shoot.



1880. JOHN DICKSON



The round body side by side is a perfidious creature, while the gun bewitch you it also hides the part you would like to see the most. Two of them would be necessary.

One to admire its proportions, the shape of the neck of the stock, which curves toward the action and the body, where file and chisel removed the unnecessary to reveal its curves.

The other one exposed without wood, to show the famous lock that, regardless any consideration, transcends the concept of the well-built mechanism to assume the role of incomparable work.



Fig. 1 – Earliest version of the lock.

Fig. 2 – A later version, with safety sear (o) that blocks the head of the tumbler.

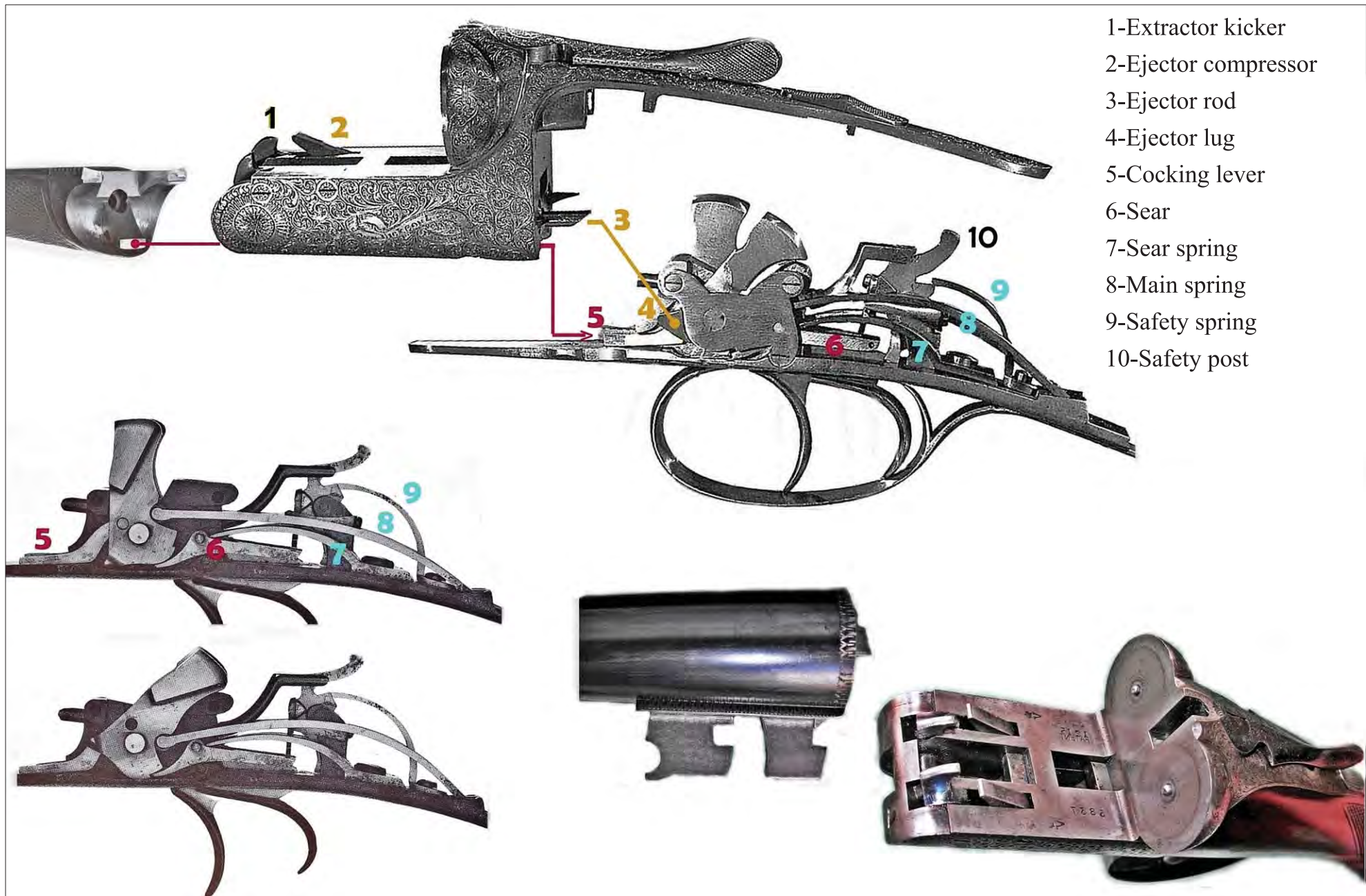
Fig. 3 – The lock, as it is still made in Edinburgh.



Built in 1881



Early XXth century version



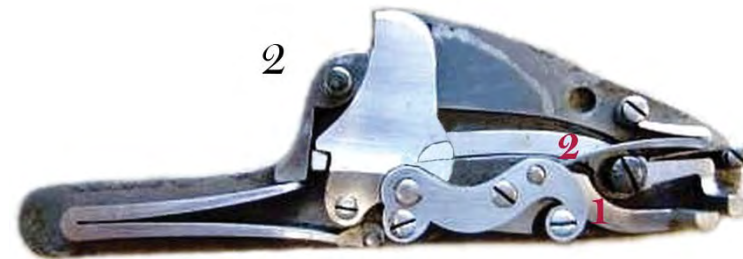
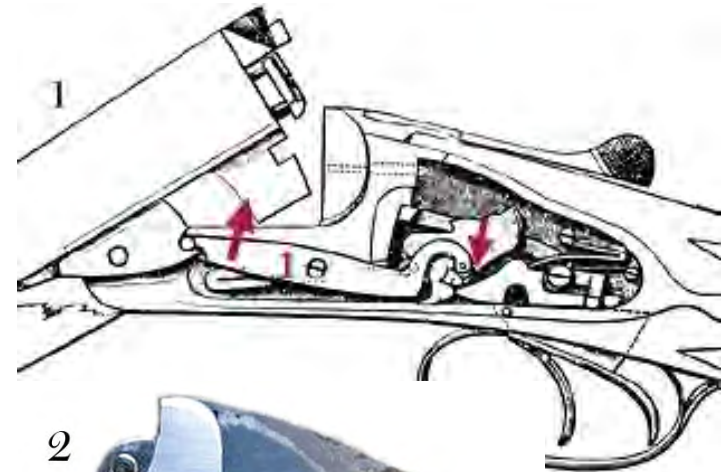
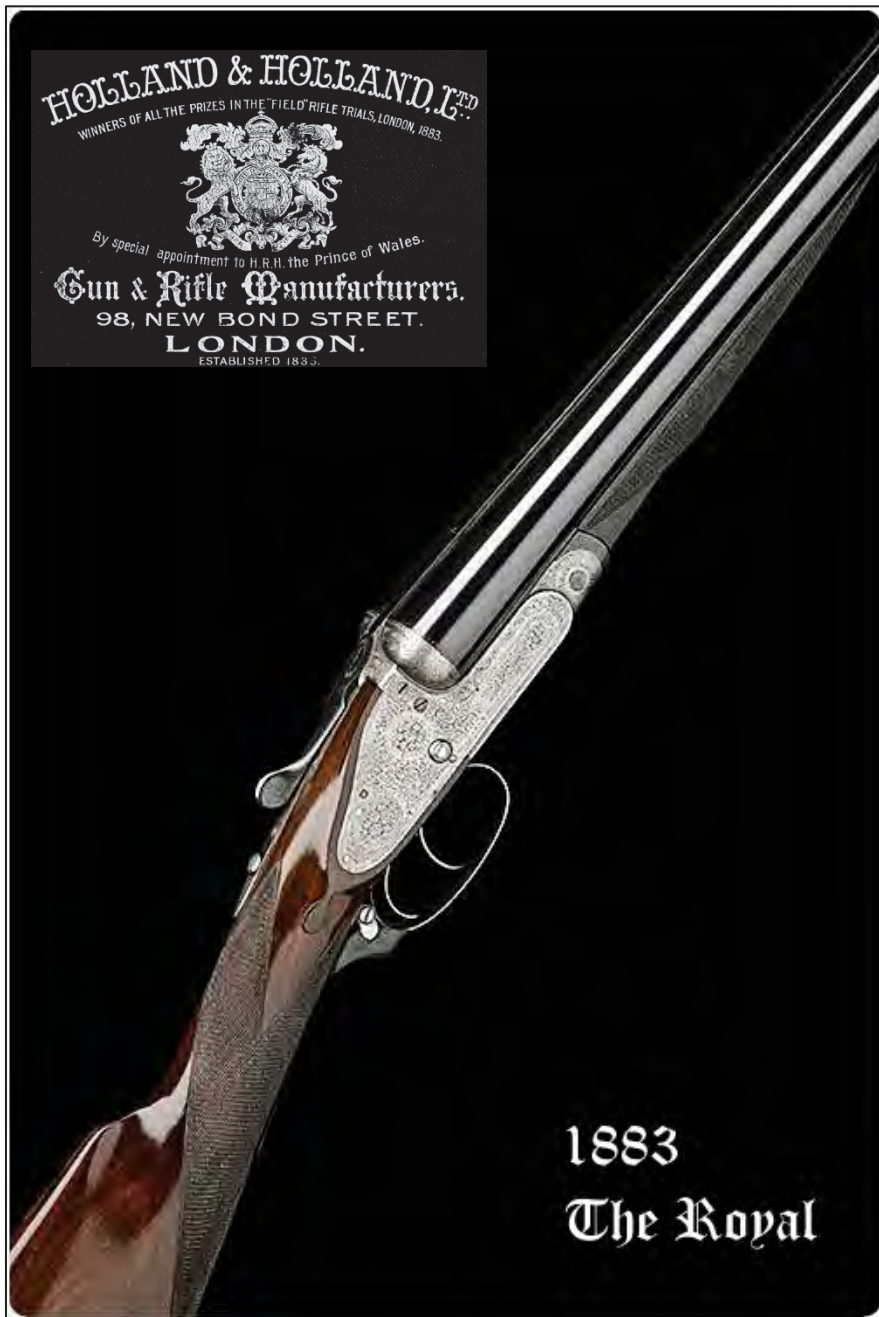


Fig. 1 – The rotation of the barrels moves the lever (1), this one cocks the tumbler pushing downwards.

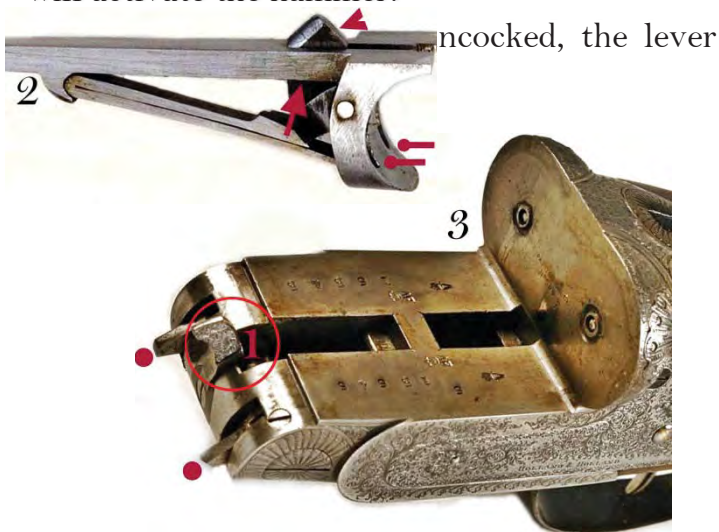
Fig. 2 – The lock is the evolution of the Scott' one built in 1878. With the mainspring before the tumbler, it's been possible to expand the bridle and to put the sear's pin (1) in a higher position.

Fig. 1 – The evolution of the Royal' mechanics.

Fig. 2 – The ejector by Thomas Southgate.

Fig. 3 – Closing the gun, the spur (1) cocks the ejector's hammers. Opening the gun, with the tumblers uncocked, the protruding levers (o) will activate the hammers.

Fig. 4 – The tumbler is uncocked, the lever end has risen. The full opening of the barrels will activate the hammer.



HOLLAND & HOLLAND,
Gun & Rifle Manufacturers,
98, NEW BOND STREET,
LONDON.

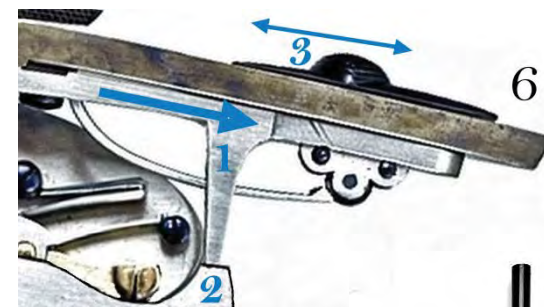


Fig. 5 – The definitive H&H lock. The sear (1) is hinged in a high position, (2) is the safety sear.

Fig. 6 – The automatic safety. Operating the opening lever, the rod (1) moves backward and blocks the triggers (2). The sled (3) disengages the mechanism and can also manually arm it.





Among all the high-level English sidelock guns, the one made by Holland & Holland has been chosen as a model by the continental gunmakers since the end of the XIX century.

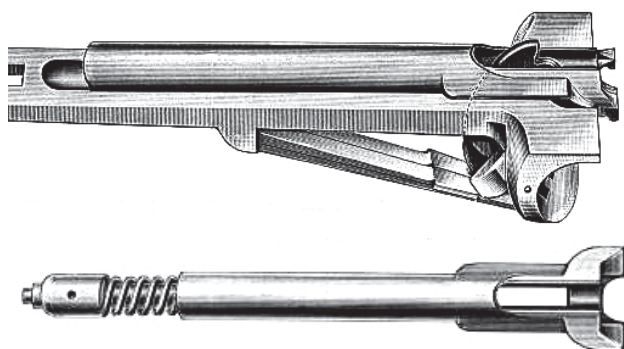
Of course the English gunmaker attributes this copying to the admiration for his gun, but I think there are also more simple reasons.

The Holland & Holland type side by side has an attractive appearance even with a medium-level finishing.

The mechanics works good even when the construction and the adjustment are not extremely accurate.

The production is not so expensive thanks to the big availability of semi-finished parts.

In 1922 the Royal side by side was equipped with a new self-opener mechanism, it takes energy from a spiral spring and it is not inside the body, but on the fore-end iron.



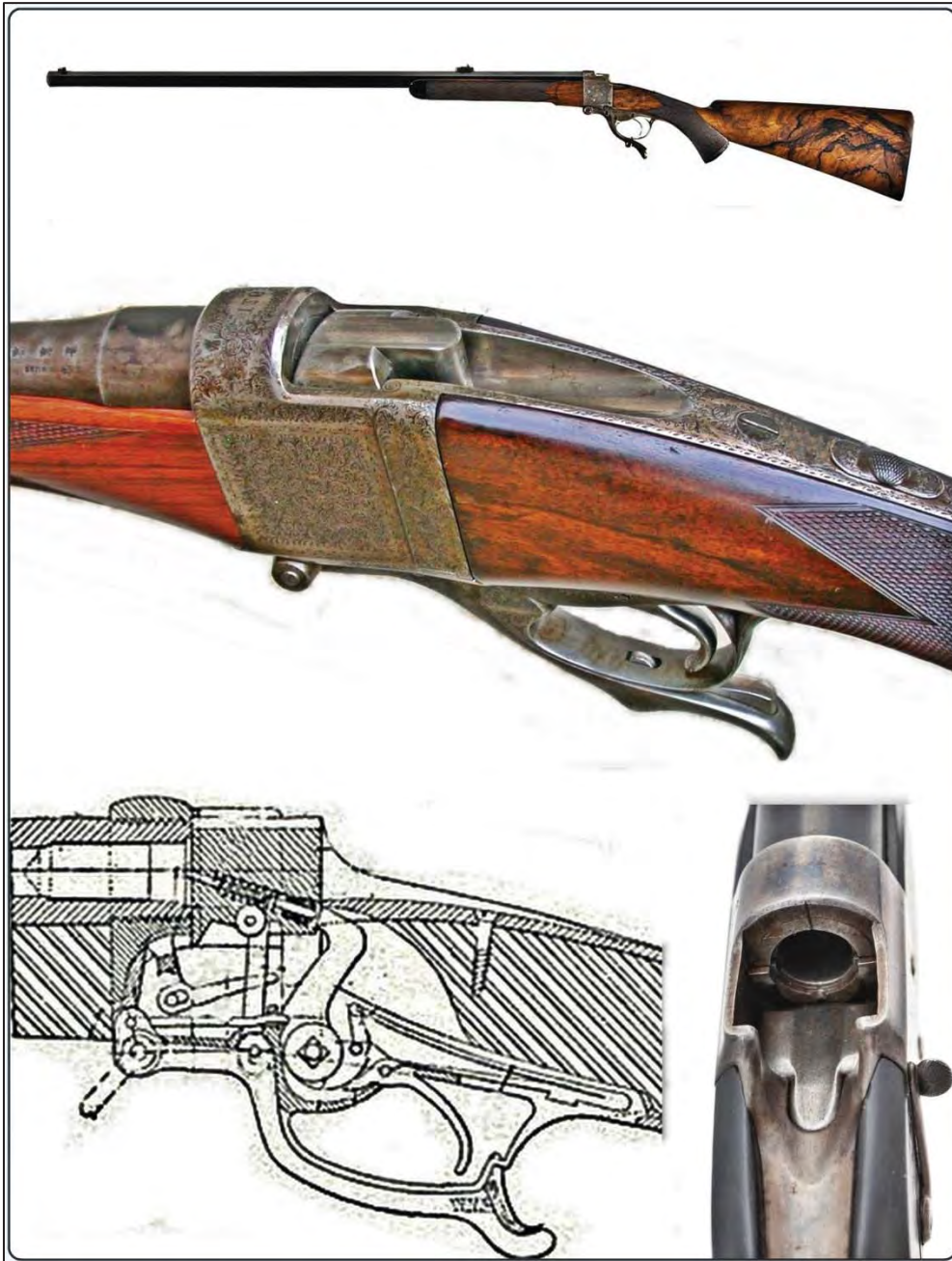


The John
Farquarson' gun



The Paradox side by side
by Holland & Holland





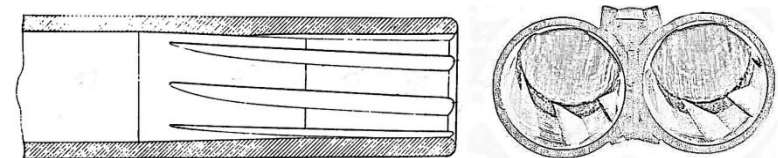
THE SINGLE-SHOT RIFLE

In faraway places, when the express rifle broke, the hunter was in big trouble. It was also the fear for this situation that promoted the spread as spare gun of the rifle patented by Farquharson in 1873, Geo Gibbs started to build it from 1875.

A rugged and simple gun, its falling block action is able to bear the torment of the most powerful shots.

Once the patent had expired this rifle started to be manufactured from several gunmakers.

THE PARADOX SIDE BY SIDE



In India it was possible to encounter a tiger while handling a side by side and hunting ducks; Lt. Colonel George Vincent Fosbery didn't like to go around bringing the weight of a second gun, thus he had a paradoxical idea.

As a gun expert he designed a particular rifling of the barrels, made only in the muzzle area, long enough to impart a rotating movement to the bullet, but not so much to scatter the shot.

From 1886 the Paradox was built by Holland & Holland in the bore 8, 10, 12 and 16.

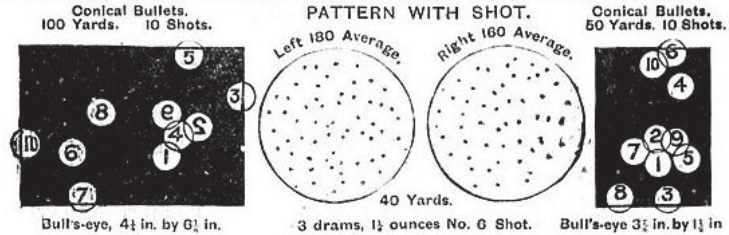
HOLLAND'S "PARADOX"

Double-barrelled Gun.

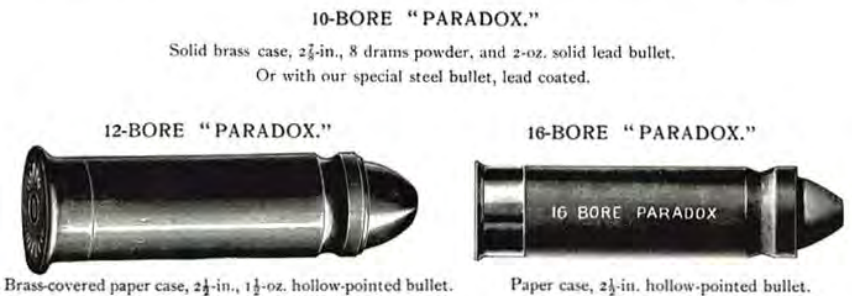
THE INVENTION OF COLONEL FOSBERY, V.C.

Shooting Shot like a perfect Gun and Conical Bullets up to 100 yards, with the accuracy of an Express Rifle, made with Re-bounding Locks or Hammerless.

The following remarkable Diagrams made before the Editor of "The Field," April 12th, 1886:—

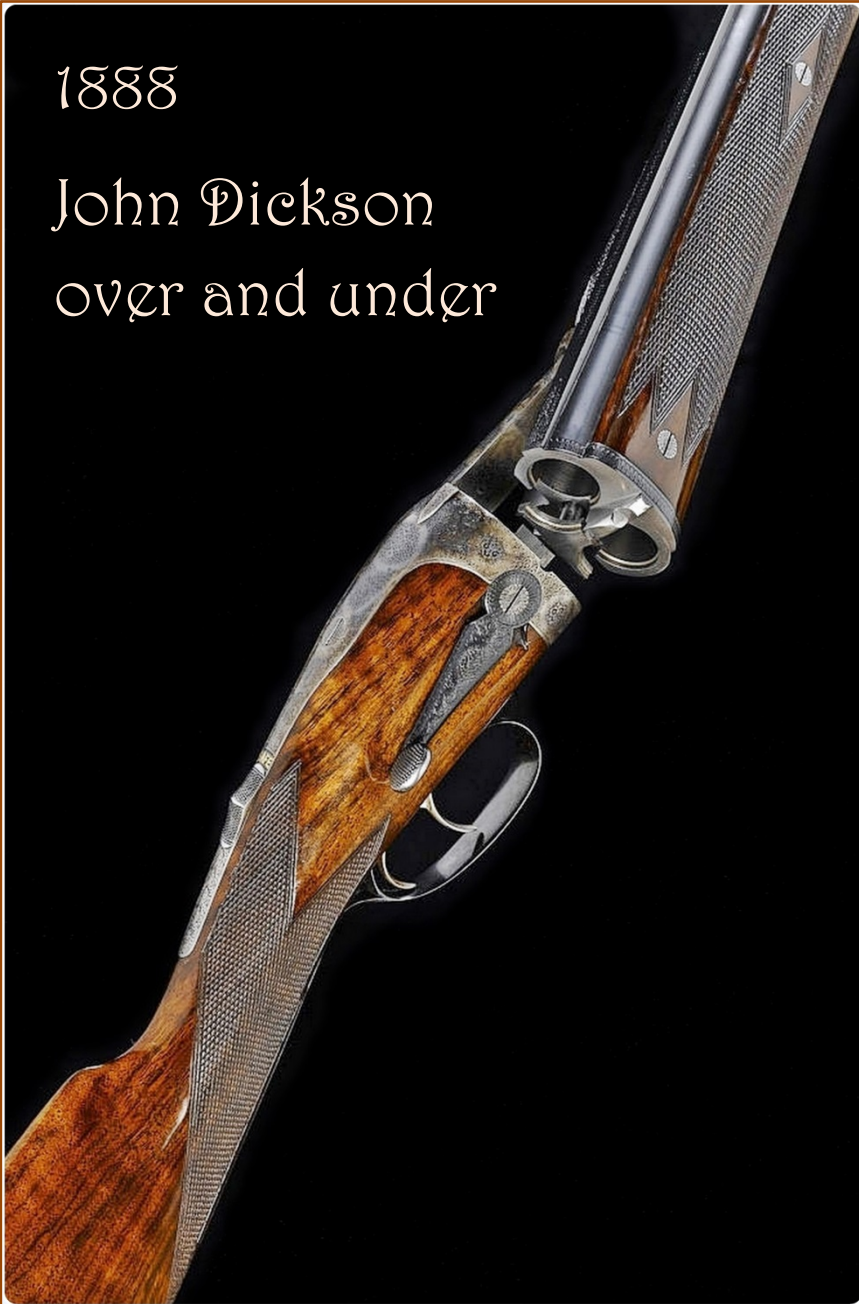


Special "Paradox" Cartridges and Requisites.



1888

John Dickson over and under



By the end of XIX century the English side by side came at the end of its development. It was not humanly possible to go further and, since then, it's been built in the same way all over Europe with very limited exceptions.

Thus the English gunmakers directed their efforts towards a kind of side by side that had been neglected for decades, the one with superimposed barrels. In 1888 J. Dickson patented a fascinating gun, but it still didn't know which way to go.

In 1909 J. Robertson presented the Boss, it still influences the high level over and under guns. The wonderful Woodward and those made by F. Beesley, by Westley Richards and by E. Green, that for few times was adopted by Purdey, appeared before the Great War.





Even the hare, who understands about guns, looks in disbelief some recent realizations of those gunmakers who were able to make the best of the refined English production. Gold profusion in a barbarous manner, big papier-mache theatrical masks. Boutet is vilified while damascus is drawn by a laser-machine. The time of pink and blue hardening obtained with secret alchemies is far away. A time when even the buttplate was designed using the refined sobriety that is the essence of taste.





*Paolo Tebaldi. November 2018.
English version by Piero Zanette.*

