



A.D. 1873, 16th JUNE. N° 2119.

SPECIFICATION

OF

FREDERICK HARGRAVE GREY
AND
WILLIAM HARRIS.

BREECH-LOADING EXPRESS RIFLES, &c.

LONDON:

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1873.



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Breech-loading Express Rifles, &c.

LETTERS PATENT to Frederick Hargrave Grey and William Harris, both of 43, Old Bond Street, in the County of Middlesex, Gun Makers, for the Invention of "IMPROVEMENTS IN BREECH-LOADING EXPRESS RIFLES AND OTHER SMALL-ARMS."

Sealed the 12th December 1873, and dated the 16th June 1873.

PROVISIONAL SPECIFICATION left by the said Frederick Hargrave Grey and William Harris at the Office of the Commissioners of Patents, with their Petition, on the 16th June 1873.

We, FREDERICK HARGRAVE GREY and WILLIAM HARRIS, of No. 43,
5 Old Bond Street, in the County of Middlesex, Gun Makers, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN BREECH-LOADING EXPRESS RIFLES AND OTHER SMALL-ARMS," to be as follows:—

The construction of parts of mechanism herein-after described for fastening down the barrels to the breech piece of double and single
10 breech-loading guns and rifles called "hinge joint guns," the barrels of which are turned down for loading at the breech.

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One portion of our improvements consists of a contrivance for working a "lever grip," in addition to and simultaneous with the "double or single grip" now used. The bolt of this grip is worked in the same part of the false breech as in former plans (modifications of which have been Patented by John Thomas and H. Walker).

5

Secondly. An improved method of hanging this bolt on a perfect axle made by cutting a recess in the upper end of the bolt in which the axle frame fits. The axle frame and bolt being thus hinged together can be embedded in the false breech, level with the under surface of the same, so as not to require the wood of the stock of the gun to be cut away as 10 in former plans; or the bolt may be made to work in a horizontal slot. The working motion of this bolt is given by the same lever that is used for the double or single grip when used in conjunction with either of them, thus giving additional security and endurance for "express rifles," or any guns for heavy charges, and being worked at the same time and 15 with the same lever gives advantages hitherto unattained. This additional lever grip may also be used in a similar manner without being used in conjunction with the ordinary grip, and is more simple and serviceable for the ordinary breech-loading shot guns used for sporting purposes, in which case it can be worked by a lever in front of, or over 20 the trigger guard, or by a lever on the top of the false breech, or by any of the ordinary levers, upper, lower, or lateral. When this additional lever grip is worked in connection with the usual grip H, H, (see Drawing, Figure 1), the bolt B is hung on the improved axle frame A and is continued downward, projecting through the trigger plate, forming 25 a stud C and working in a slot D, D, in the body and trigger plate. The heel of the ordinary grip lever being provided with an oblique slot D corresponding to the action of the projecting end of the bolt B, so that the lever in completing its motion to the guard takes the end of the bolt B into the oblique slot D and carries it forward, with leverage 30 power, into its recess D, D, and over that portion of the steel barrel lump E projecting at the end of the barrels. Or the end of the bolt may be linked to the boss or axle of the usual grip and worked by its usual or ordinary movement, either inside or outside the trigger plate or frame of the gun, by these means giving the most perfect security 35 against any vibration of the closing parts of the gun under the explosion of heavy charges.

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SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Frederick Hargrave Grey and William Harris in the Great Seal Patent Office on the 12th December 1873.

TO ALL TO WHOM THESE PRESENTS SHALL COME, we, FREDERICK
5 HARGRAVE GREY and WILLIAM HARRIS, both of No. 43, Old Bond Street, in the County of Middlesex, Gun Makers, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Sixteenth day of June, in the year of our Lord One thousand eight hundred and seventy-three, in the thirty-
10 sixth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto us, the said Frederick Hargrave Grey and William Harris, Her special licence that we, the said Frederick Hargrave Grey and William Harris, our executors, administrators, and assigns, or
15 such others as we, the said Frederick Hargrave Grey and William Harris, our executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands and Isle of Man, an Invention for "IM-
20 PROVEMENTS IN BREECH-LOADING EXPRESS RIFLES AND OTHER SMALL-ARMS," upon the condition (amongst others) that we, the said Frederick Hargrave Grey and William Harris, our executors or administrators, by an instrument in writing under our, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and
25 in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that we, the said Frederick Hargrave Grey and William Harris, do hereby declare the nature of our said Invention, and
30 in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say :—

This Invention has for its object improvements in breech-loading "express rifles," fowling pieces, and other small fire-arms, in which the
35 barrels turn down and present the breech ends open upwards for loading as in breech-loading fowling pieces of the ordinary construction, in order to

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more securely lock the barrels in position for firing. We employ a swinging or sliding bolt working in the upright portion of the breech piece, and a contrivance for working it, in addition to and simultaneous with the usual double or single lever grip, the bolt of this grip is worked in the same portion of the false breech as in former plans, but our improvements enable us to work it with the same lever as the usual double or single grip at the same time and in addition thereto, constituting together so firm a combination of gripping power hitherto unattained, and presenting such resistance to the vibration of the parts and such endurance as the explosion of heavy charges in express rifles and other arms require. 5 10

The second portion of our Invention consists of a method of hanging the vertical lever bolt on a perfect axle which is made by cutting a circular recess in the side of the upper end of the bolt into which the axle frame fits; the axle frame and bolt being thus hinged together they can be embedded in the tang of the false breech level with the under surface of the same, so as not to require the wood of the gun stock to be cut away as in former plans. Or the bolt may be made to work in a horizontal slot. The working motion of this bolt is given by the same lever that is used for the double or single grip when used in conjunction with either of them, or may be so worked by itself, and is more simple and serviceable for the ordinary breech-loading shot guns used for sporting purposes, in which case it can be worked by a lever or spring. The lever may be in front of or over the trigger guard or on the top of the false breech, or it may be worked by any of the ordinary levers, upper, lower, or lateral. When this additional bolt is worked in connection with the usual grip H, H, (see Drawing, Figure 1), and hung in our improved axle frame A, it is continued downwards through the trigger plate or under frame of the gun, forming a stud C and working in a slot D, D, in the body and trigger plate. The heel of the ordinary grip lever being provided with an oblique slot I, I, corresponding to the action of the projecting stud C formed on the lower end of the bolt B, so that on completing the closing motion of the lever to the guard in closing the gun the slot I, I, in the heel of the lever G engages the stud C in the slot I, I, carrying the bolt B forward with leverage power over that portion of the steel barrel lump E projecting at the end of the barrels, lump E thus forcing back bolt B and falling into recess F, lever G standing to right of open and in a line of closed 15 20 25 30 35

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gun. Or the end of the bolt may be linked to the boss or axle of the usual grip H, H, (Figure 1), and worked by its ordinary movement, the link may work either inside or outside the trigger plate or frame of the gun, by these means giving the most perfect security against
5 vibration of the closing parts of the gun under the explosion of heavy charges.

Figure 2 shews the working surface of the lever with the oblique slot or channel I, I.

10 In witness whereof, we, the said Frederick Hargrave Grey and William Harris, have hereunto set our hands and seals, the Second day of December, in the year of our Lord One thousand eight hundred and seventy-three.

F. H. GREY. (L.S.)

WILLIAM HARRIS. (L.S.)

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FIG. 1.

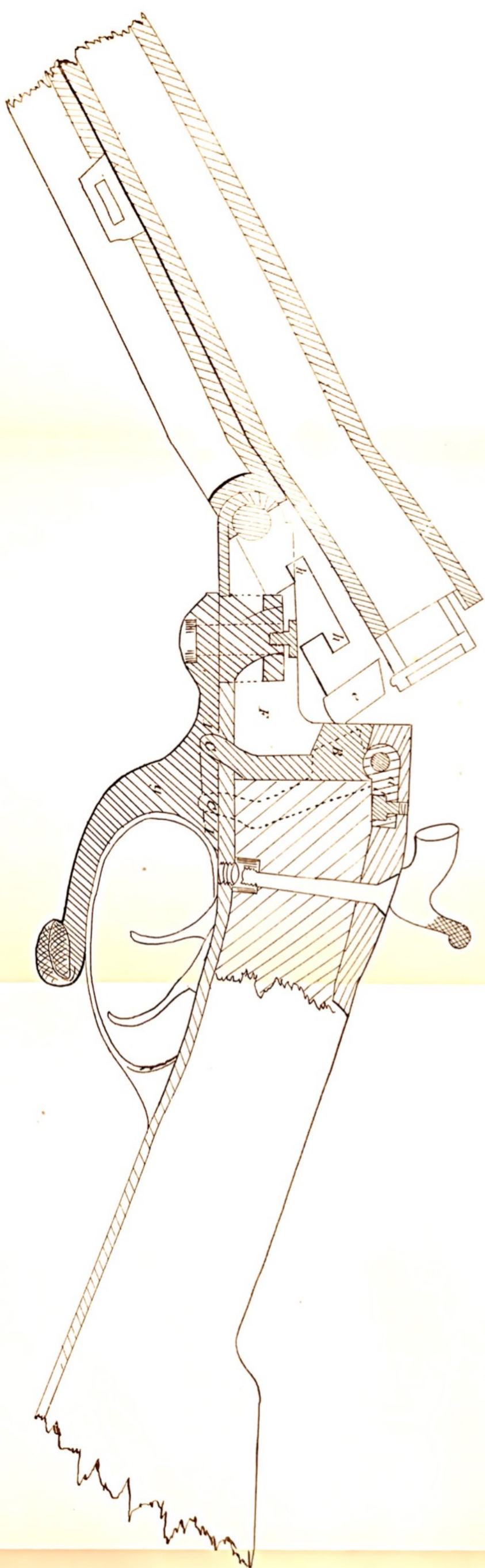


FIG. 1.

E. Steel Lump.
F. Revers into which E. falls.
B. Ball, dotted lines its motion given by closing gun and is returned by the action of lever g from right angle to the line of Gun.

FIG. 2.



The tiled drawing is not colored.