



---

A.D. 1840 . . . . . N° 8513.

---

**Breeches of Fire-arms, and Cartridges.**

---

BUSH'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, WILLIAM BUSH, of Camberwell, in the County of Surrey, Merchant, send greeting.

**WHEREAS** Her present most Excellent Majesty Queen Victoria, by  
5 Her Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Twentieth day of May, in the third year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said William Bush, Her especial licence, full power, sole privilege and authority, that I, the said William Bush, my exors,  
10 admsors, and assigns, or such others as I, the said William Bush, my exors, admsors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the Town of Berwick-upon-Tweed, the  
15 Invention of "**IMPROVEMENTS IN FIRE-ARMS AND IN CARTRIDGES,**" communicated to me by a certain foreigner residing abroad; in which said Letters Patent is contained a proviso, that I, the said William Bush, shall cause a particular description of the nature of the said Invention, and in what

*Bush's Improvements in Fire-arms and in Cartridges.*

manner the same is to be performed, to be inrolled in Her said Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said in part recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear. 5

**NOW KNOW YE**, that in compliance with the said proviso, I, the said William Bush, do hereby declare the nature of the said Invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, reference being had to the Drawing hereunto annexed, and to the figures and 10 letters marked thereon (that is to say):

The Invention relates, first, to a mode of constructing the breech, and apparatus connected therewith, in order more conveniently to load at the breech. And, secondly, the Invention relates to a mode of constructing cartridges for such fire-arms as are discharged by an instru- 15 ment passing through the breech. And in order to give the best information in my power, I will proceed to describe the Drawing hereunto annexed.

## DESCRIPTION OF THE DRAWING.

1, shews the gun complete; 2, is the barrel, with an opening or slit 20 at the back end to receive the apparatus for the breech, at the end of which slit or opening are two pieces *z, z*, brazed on, each having a hole through which a screw passes and fixes a short connecting rod (8) between the lever (6) and the breech (3), together producing a parallel motion to the breech, and whereby the breech acted upon by the lever 25 (6) slides backwards and forwards out and again into the barrel (2); 3, 3, a side and top view of the breech with screw and plate, which connect it to the barrel; 5, a screw made of thin shear steel, to be screwed into that part of the breech which enters the barrel, the whole of the centre being hollow to be filled with pewter, having a hole through 30 its centre where a needle passes, which by perforating the cartridge, as hereafter described, ignites the charge. The advantage of the pewter for the centre of the breech is that it does not oxidise. And, secondly, the steel screw casing is made sufficiently thin to be elastic, that when

*Bush's Improvements in Fire-arms and in Cartridges.*

the gun is discharged the concussion is sufficiently strong to so far act upon the pewter as to fill up any cavity that may be formed by the friction of the needle or the sliding of the breech. 6, 6, side and top view of lever with screw which attaches it to the breech, which when  
5 lifted or moved up and down causes the breech to slide backwards and forwards as described; 8, a small rod connecting the lever 6, at  $x$ , with the end of the barrel at  $z$ ,  $z$ ; 9, represents the side and top view of the needle which passes through the breech, which when struck by the hammer (20) is propelled with such velocity through the breech into  
10 the cartridge where the percussion powder is placed as by its friction to cause immediate ignition; 11, a side, bottom, and top view of the plate which retains the breech in its place in the barrel; 14, top and side view of the breech plate which is screwed on the stock, and to which the barrel is attached as in the ordinary gun, the further end having  
15 a mortice to receive the spring and ketch (15). This ketch with its spring are attached to the end of the lever (6), to keep it secure in its place when down. 16, is a top and side view of of the lock, the lock plate shewn with its fittings making the lock complete; 17, side view of the trigger guard; 18, side view of the trigger; 19, side view of the  
20 seer; 20, 20, the hammer and tumbler in one piece; 21, a safety guard to stop the action of the hammer upon the needle when not in use; 21<sup>D</sup>, a different description of safety guard more particularly adapted to soldiers' muskets; 22, the main spring; 23, a side view of the spring acting upon the seer; 24, a gun complete as altered from either a flint  
25 or percussion gun retaining the stock, lock, barrel, and furniture, with such modifications and alterations as are herein-after described; 25, the old gun barrel prepared to receive the new end as herein-after described; 26, the new end of a gun barrel made to braze on to the end of 25, or an old gun barrel prepared for that purpose with openings as above  
30 described may be used; 27, the barrel complete, having been brazed together; 28, the side view of the breech; 29, side view of the lever; 30, side, top, and end view of a piece of steel dovetailed, which when screwed under the breech maintains in its position the breech and secures the parallel motion when acted on by the lever, as described in  
35 respect to lever (6); 31, a lock complete, as altered from either flint or

*Bush's Improvements in Fire-arms and in Cartridges.*

percussion; 32, right and left hand and front view of the outside hammer with its various screws; 33, is a connecting rod between the outside hammer and the internal hammer, described in respect to 35, and which strikes the needle; 34, a crank attached to the internal hammer 35, as well as the connecting rod 33, which gives the impetus 5 to the internal hammer, thereby causing it to strike the needle; 35, is a side and back view of the internal hammer; 36, is a safety guard to prevent the action of the hammer when not in use; 37, a top and side view of a screw top in which the safety guard reposes when brought into use. 10

Description of the cartridge applicable to the above described gun, and which forms the second part of the Patent:—

38, end and side view of the end of the cartridge case, composed of card board, containing the friction or percussion powder as herein-after described; 39, is a piece of card board in the shape of a top of a pill 15 box; 40, a similar piece of card board sufficiently small to fit tightly into 39, with a hole in the centre to receive the powder herein-after described; 41, a piece of cloth, calico, or linen to be pasted over the percussion or friction powder in 40, to keep it in its place and to prevent ignition by detonation; 42, a view of a percussion case made in wood 20 with a hole in the centre, in which is to be placed the percussion or friction powder; 43, a square piece of wood with an outside round case in card board; 42, a side view of the same; 45, end and side view of the end of a cartridge case, containing the percussion powder in a metal cap, composed of either copper or any other metal; 46, a similar piece 25 of card board to 39; 47, a similar piece of card board to 40; 48, to top and end view of a metal cap, in which is placed the percussion or friction powder, to be placed between the cards 46 and 47; 49, the inside and outside view of a musket cartridge complete; 50, the inside and outside view of a sporting cartridge complete. 30

Having thus described the nature of the Invention, and the manner of performing the same, I would have it understood that what I claim is, first, the mode of constructing the hinder end of the barrels of fire-arms in combination with the means of constructing and moving the breech, as herein shewn and described; and, secondly, I claim the mode 35

---

*Bush's Improvements in Fire-arms and in Cartridges.*

---

of constructing cartridges and applying percussion powder to the interior of the cartridge, and at the back of the charge of powder, as described.

In witness whereof, I, the said William Bush, have hereunto set my hand and seal, this Twentieth day of November, in the year  
5 of our Lord One thousand eight hundred and forty.

WM BUSH. (L.S.)

**AND BE IT REMEMBERED**, that on the Twentieth day of November, in the year of our Lord 1840, the aforesaid William Bush came before our said Lady the Queen, in Her Chancery, and acknowledged the  
10 Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

HORNE.

Inrolled the Twentieth day of November, in the year of our Lord One thousand eight hundred and forty.

---

---

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1854.