



A.D. 1883, 9th August. N° 3874.

S P E C I F I C A T I O N

OF

THOMAS HORSLEY & CHARLES PRYSE.

BREECH LOADING SMALL ARMS.

PRINTED BY ORDER OF THE COMMISSIONERS OF PATENTS FOR INVENTIONS.

LONDON:
PUBLISHED AND SOLD AT
THE COMMISSIONERS OF PATENTS' SALE DEPARTMENT,
38, CURSITOR STREET, CHANCERY LANE, E.C.

Price 6d.

1884.

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Breech Loading Small Arms.

LETTERS PATENT to Thomas Horsley of the City of York Gun Maker and Charles Pryse of Birmingham in the County of Warwick Gun Maker for an Invention of "IMPROVEMENTS IN BREECH LOADING SMALL ARMS."

PROVISIONAL SPECIFICATION left by the said Thomas Horsley and Charles Pryse at the Office of the Commissioners of Patents on the 9th August 1883.

THOMAS HORSLEY of the City of York Gun Maker and CHARLES PRYSE of Birmingham in the County of Warwick Gun Maker "IMPROVEMENTS IN BREECH LOADING SMALL ARMS"

Our invention has reference to breech loading small arms of the kind commonly called drop down guns that is guns in which the barrels turn on a joint the breech ends of the barrels being opened for charging by the depression of the muzzle ends and the consequent raising of the breech ends from the face of the break off.

Our invention consists in constructing and arranging the parts of the said guns in the manner hereinafter described whereby on the raising of the breech ends of the barrels the stand sides of the main springs raise the hammers to full cock in which position they are retained by the ordinary sear and bent mechanism until the hammers are released by pressure on the triggers. On shutting down the barrels after charging them the stand sides of the main springs are depressed so as not to impede the descent of the hammers

We construct and arrange the parts of the gun in the following manner. In the body of the gun and underneath each barrel we make a longitudinal slot through which projects the end of the long arm of a lever turning upon a centre on the underside of the body. The fore end is provided with a short prolongation which bears upon the projecting end of the said lever so that when the fore end is raised by the shutting down of the barrels the projection of the fore end depresses the said long arm of the lever the short arm being consequently raised.

The stand side of the main spring is not fixed as usual but bears against the long arm of a small lever situated above it and turning on a centre on the lock plate.

[Price 6d.]

Horsley & Pryse's Improvements in Breech Loading Small Arms.

The short arm of the first described lever engages under the short arm of the small lever. When the barrels are shut down for discharge the stand side of the main spring is depressed by the action of the prolonged fore end on the lever and short lever described and when the barrels are raised from the break off for charging the gun the prolonged fore end no longer depresses the stand side of the mainspring 5 through the two levers and the said stand side of the main spring rises. The extreme end of the stand side of the main spring being situated immediately under the breast of the hammer the rising of the said stand side of the main spring raises the hammer to full cock in which position it is retained in the ordinary way. On shutting down the barrels after charging the gun the stand side of the main spring 10 is depressed by the prolonged fore end and levers the said stand side of the main spring is thereby removed from the breast of the hammer and leaves it free to fall when the trigger is pressed upon the tension of the main spring being at the same time increased.

It will thus be seen that each time the breech end of the barrels are raised the stand side of the main spring rises and cocks the hammer and that on shutting 15 down the breech ends of the barrels the said stand side of the main spring is depressed removing it out of the way of the hammer when falling and at the same time increasing the tension of the mainspring. The gun is hence self cocking.

Our invention is applicable to single and double barrel drop down guns and both 20 to bar and back work guns.

Horsley & Pryse's Improvements in Breech Loading Small Arms.

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said Thomas Horsley and Charles Pryse in the Patent Office on the 30th January 1884.

THOMAS HORSLEY of the City of York Gun Maker and CHARLES PRYSE of Birmingham in the County of Warwick Gun Maker "IMPROVEMENTS IN BREECH LOADING SMALL ARMS"

Our invention has reference to breech loading small arms of the kind commonly called drop down guns; that is, guns in which the barrels turn on a joint, the breech ends of the barrels being opened for charging by the depression of the muzzle ends and the consequent raising of the breech ends from the face of the break off.

Our invention consists in constructing and arranging the parts of the said guns in the manner herein after described, whereby on the raising of the breech ends of the barrels, the stand sides of the main springs raise the hammers to full cock in which position they are retained by the ordinary sear and bent mechanism until the hammers are released by pressure on the triggers. On shutting down the barrels after charging them the stand sides of the main springs are depressed so as not to impede the descent of the hammers.

We construct and arrange the parts of the gun in the following manner. In the body of the gun and underneath each barrel we make a longitudinal slot through which projects the end of the long arm of a lever turning upon a centre on the underside of the body. The fore end may be provided with a short prolongation which bears upon the projecting end of the said lever so that when the fore end is raised by the shutting down of the barrels the projection of the fore end depresses the said long arm of the lever, the short arm being consequently raised.

The stand side of the main spring is not fixed as usual but bears against the long arm of a small lever situated above it and turning on a centre on the lock plate. The short arm of the first described lever engages under the short arm of the small lever. When the barrels are shut down for discharge, the stand side of the main spring is depressed by the action of the lever and short lever described and when the barrels are raised from the break-off for charging the gun the stand side of the main spring being no longer acted on by the two levers the said stand side of the main spring rises. The extreme end of the stand side of the main spring being situated immediately under the breast of the hammer the rising of the said stand side of the main spring raises the hammer to full cock in which position it is retained in the ordinary way. On shutting down the barrels after charging the gun, the stand side of the mainspring is depressed by the levers, the said stand side of the main spring is thereby removed from the breast of the hammer and leaves it free to fall when the trigger is pressed upon, the tension of the main spring being at the same time increased.

It will thus be seen that each time the breech ends of the barrels are raised the stand side of the main spring rises and cocks the hammer and that on shutting down the breech ends of the barrels the said stand side of the main spring is depressed removing it out of the way of the hammer when falling and at the same time increasing the tension of the main spring. The gun is hence self cocking.

Our invention is applicable to single and double barrel drop down guns and both to bar and back work guns.

We will now proceed to describe with reference to the accompanying Drawing the manner in which our invention is to be performed.

Horsley & Pryse's Improvements in Breech Loading Small Arms.

Figures 1 and 2 represent side elevations of a portion of a double barrel drop down gun, with the stock removed, containing self cocking mechanism constructed according to our invention; Figure 3 represents the upper side and Figure 4 the underside of the body of the gun; Figures 5 and 6 represent the two levers of the cocking mechanism.

In Figure 1 the barrels of the gun are represented shut down, the hammers cocked and the main springs in a state of high tension and in Figure 2 the barrels are represented raised from the break off and the hammers cocked by the liberation and rising of the stand sides of the main springs.

The same letters of reference indicate the same parts in the several Figures of the Drawing.

As the cocking mechanism at each side of the double gun is alike in construction and action we will describe the mechanism at one side only; *a* is the barrel; *b* the break off; *c* the body and *d* the fore end; *e* is the principal lever of the cocking mechanism (shown separately in Figure 5) turning on the pin or centre *e*² on the side of the body of the gun and *f* is the smaller lever (shown separately in Figure 6) turning on the pin or centre *f*² on the body of the gun. The short arms of the two levers *e, f* are engaged together in the manner represented in Figures 1 and 2 so that when the long arm of the principal lever *e* descends the long arm of the smaller lever *f* also descends and the reverse. The end or head of the principal lever *e* works in a longitudinal slot *g* in the body of the gun and underneath the barrel and the said head is curved or inclined to be acted upon by the descending barrel *a*; *h* is the lock plate carrying the hammer *i* and the usual parts of a gun lock; *k* is the main spring the stand side *l* of which is moveable and bears against the long arm of the small lever *f* situated above it.

The action of the parts is as follows:—

After the gun has been discharged the parts of the cocking mechanism occupy the respective positions shown in Figure 1 the breast of the discharged hammer lying over the extreme free end of the stand side of the main spring *k*. When the breech ends of the barrels are raised for opening the breech the stand side *l* of the main spring (which stand side has been compressed in the manner hereinafter described) is released and rising acts upon the breast of the hammer *i* and raises it to full cock in which position it is retained by the sear *m* in the usual way as represented in Figure 2. As the stand side *l* of the main spring rises it acts upon the lever *f* which raises the long arm of the principal lever *e* the two levers now occupying the respective positions shown in the said Figure 2, the head of the principal lever *e* projecting from the face of the body of the gun. The hammer is thus automatically cocked on the opening of the gun for recharging it.

On shutting down the barrel after the gun has been charged, the barrel acting upon the head of the principal lever *e* depresses the long arm of the said lever *e* and through its short arm causes the descent of the longer arm of the lever *f*.

The said long arm of the lever *f* acting upon the stand side *l* of the main spring *m* depresses the said stand side and thereby removes it from the breast of the cocked hammer *i* and leaves the said hammer free to fall when the trigger is pressed.

The depression of the stand side *l* also increases the tension of the main spring *k* as illustrated in Figure 1 and the gun is ready for discharge.

Thus, each time the breech end of the barrel is raised the stand side *l* of the main spring rises and cocks the hammer *i* the two levers *e* and *f* being permitted to take the positions Figure 2 by the lifted barrel and on shutting down the breech end of the barrel the said stand side *l* of the main spring is depressed removing it out of the way of the cocked hammer and at the same time increasing the tension of the main spring.

Having now described the nature of our invention and the manner in which the same is to be performed We wish it to be understood that we claim as our invention of—Improvements in breech loading small arms of the kind commonly called drop down guns;

Horsley & Pryse's Improvements in Breech Loading Small Arms.

The construction and combination of parts hereinbefore described and illustrated in the accompanying Drawing for cocking the hammers of the said guns on lifting the breech ends of the barrels for loading and for increasing the tension of the main springs and leaving the cocked hammers free to fall on closing the barrels
5 after charging; that is to say, the combination with a main spring of which the stand side is moveable, of the two levers *e* and *f* arranged with respect to one another and also with respect to the main spring and barrel and acting substantially as and for the purposes described and illustrated.

In witness whereof I the said Charles Pryse have hereunto set my hand and
10 seal this—Twenty sixth—day of January in the year of our Lord one thousand eight hundred and eighty four

CHARLES PRYSE (L.S.)

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LONDON: Printed by EYRE AND SPOTTISWOOD,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

1884.