

N^o 1215



A.D. 1915

Date of Application, 25th Jan., 1915

Complete Specification Left, 3rd Mar., 1915—Accepted, 10th June, 1915

PROVISIONAL SPECIFICATION.

Improvements relating to Toy Guns.

We, BRITAINS LIMITED and FREDERICK BRITAIN, Toy Manufacturers, both of 28, Lambton Road, Hornsey Rise, London, N., do hereby declare the nature of this invention to be as follows:—

5 This invention relates to toy guns of that class which have a slotted breech to receive the ammunition or projectiles which are discharged by a spring pressed trigger adapted to enter the slot in the breech in the discharging operation, the gun being for example of the naval type and mounted on a carriage for field operations.

10 The primary object of the present invention is to provide improved means for securing the usual flat or leaf spring which operates the trigger in the trail of the carriage in such a manner that the spring is not so liable to breakage as hitherto and so that should such spring break it may be readily replaced by a new one, and to this end in one embodiment of the invention the rear end of the trail is open above for a considerable portion from the rear of the trail and the
15 spring which at its forward end abuts against the lower end of the trigger is carried rearwards over one or more bridges or crosspieces between the side members of the trail and at its rear bears against a transverse abutment on the trail, being held in place by a cross pin extending across the spring above same, said pin engaging lugs on the trail and after insertion through said lugs
20 is suitably held in place as by spreading its outer ends in the known manner.

On tensioning the spring to cock the trigger for firing the spring has free play to curve or bulge for substantially its full length partly above the open portion of the trail, thus giving greater leverage to said spring and reducing the tendency to breakage, and again when it is desired to replace the spring it
25 is only necessary to remove the cross pin and slip another spring readily into place through the open portion of the trail and to replace the pin.

In a further embodiment of the invention the trail may be closed in at the top throughout its length as usual, but instead of soldering or otherwise securing the rear end of the spring to the trail as is customary, we provide the trail
30 with a cross pin forming a bridge for the spring and so position said pin that when tensioned it is free to bend or bulge throughout substantially its whole length, the forward end of the spring bearing against the trigger and the rear end against a transverse abutment at the back of the trail, said abutment being placed according to the position of the cross pin so as to secure the proper
35 degree of tension of the spring when the trigger is cocked.

By this construction also the tendency to breakage of the spring is minimised due to permitting same free play throughout its length and when necessary the spring can be readily replaced by inserting it lengthwise between the cross pin and the trail top until in position.

40 The gun itself may be pivotally mounted on the carriage and provided with a training device for elevating and lowering the muzzle in the form of a double shouldered nut working on a screw on the carriage and engaging between the shoulders a pin projecting laterally from one side of the breech end of the gun.

[Price 6d.]



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At the other side of the gun there may be provided a telescope sighting device pivoted to the carriage and having combined therewith a range finder comprising a segment movable with the sighting device and having range indications thereon adapted to coact with a pointer or equivalent on the gun.

Dated this 25th day of January, 1915.

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COMPLETE SPECIFICATION.

Improvements relating to Toy Guns.

We, BRITAINS LIMITED and FREDERICK BRITAIN, Toy Manufacturers, both of 28, Lambton Road, Hornsey Rise, London, N., do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to toy guns of that class which have a slotted breech to receive the ammunition or projectiles which are discharged by a spring pressed trigger adapted to enter the slot in the breech in the discharging operation, the gun being for example of the naval type and mounted on a carriage for field operations.

The primary object of the present invention is to provide improved means for securing the usual flat or leaf spring which operates the trigger in the trail of the carriage in such a manner that the spring is not so liable to breakage as hitherto and so that should such spring break it may be readily replaced by a new one.

The invention consists in constructing the trail of the gun and arranging the spring therein so that said spring has no permanent connection to the trail, as is usual, whereby free tension is permitted to the spring throughout substantially its entire length and the spring may be readily replaced when necessary.

Two embodiments of the invention are shown in the accompanying drawings, in which Figures 1 and 2 are respectively sectional side elevation and plan of one embodiment, and Figures 3 and 4 are respectively sectional side elevation and view from below of the second embodiment.

In the construction shown in Figures 1 and 2, *a* designates the gun, *b* the wheels of the carriage, and *c* the trail thereof, the rear end of which is open above as at *d* for a considerable portion. The spring *e*, which at its forward end abuts against the lower end of the trigger *f*, is carried rearwards over one or more bridges or cross-pieces *g* and *h* between the side members *e*¹ of the trail and at its rear bears against a transverse abutment *e*² on the trail, being held in place by a cross-pin *g*¹ extending across the spring above same, said pin engaging lugs *h*¹ on the trail and after insertion through said lugs is suitably held in place as by spreading its outer ends in the known manner.

On tensioning the spring *e* when cocking the trigger for firing, the spring has free play to curve or bulge for substantially its full length partly above the open portion of the trail, as shown in Figure 1, thus giving greater leverage to said spring and reducing the tendency to breakage, and again when it is desired to replace the spring it is only necessary to remove the cross-pin *g*¹ and slip another spring readily into place through the open portion *d* of the trail and to replace said pin.

In the form shown in Figures 3 and 4, the trail *c* may be closed in at the

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top throughout its length as usual, but instead of soldering or otherwise securing the rear end of the spring *e* to the trail as is customary, we provide the trail with a cross-pin *i* forming a bridge for the spring and so position said pin that when tensioned it is free to bend or bulge throughout substantially its whole length, the forward end of the spring bearing against the trigger *f* and the rear end against a transverse abutment *j* at the back of the trail, said abutment being placed according to the position of the cross-pin so as to secure the proper degree of tension of the spring when the trigger is cocked.

By this construction also the tendency to breakage of the spring is minimised due to permitting same free play throughout its length and when necessary the spring can be readily replaced by inserting it lengthwise between the cross-pin and the trail top until in position.

The gun itself may be pivotally mounted on the carriage and provided with a training device for elevating and lowering the muzzle in the form of a double shouldered nut *l* working on a screw *m* on the carriage and engaging between the shoulders a pin *n* projecting laterally from one side of the breech end of the gun.

At the other side of the gun there may be provided a telescope sighting device *o* pivoted at *o*¹ to the carriage and having combined therewith a range finder comprising a segment *p* movable with the sighting device and having range indications *q* thereon adapted to coact with a pointer or equivalent *r* on the gun.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. A toy gun having a spring actuated trigger adapted to engage and discharge a projectile in the breech of the gun, characterized by the trigger spring being disposed in the trail of the gun without permanent attachment thereto in such a manner as to afford free tension for the spring throughout substantially its whole length and ready replaceability of said spring at will.

2. A toy gun as in Claim 1, wherein the rear end of the trail is open above and the spring between the trigger and a rear abutment on the trail passes over one or more bridges and below a cross-pin, whereby a portion of said spring on tensioning thereof may extend through the open part of the trail, substantially as described.

3. A toy gun as in Claim 1, wherein the trail top is closed as usual and the trigger spring between the trigger and a rear abutment on the trail passes between a cross-pin on the trail and the closed top thereof, substantially as described.

4. A toy gun of the type hereinbefore specified, having its trigger spring disposed or arranged substantially as hereinbefore described.

Dated this 3rd day of March, 1915.

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[This Drawing is a reproduction of the Original on a reduced scale.]

