No. 852,942. PATENTED MAY 7, 1907.

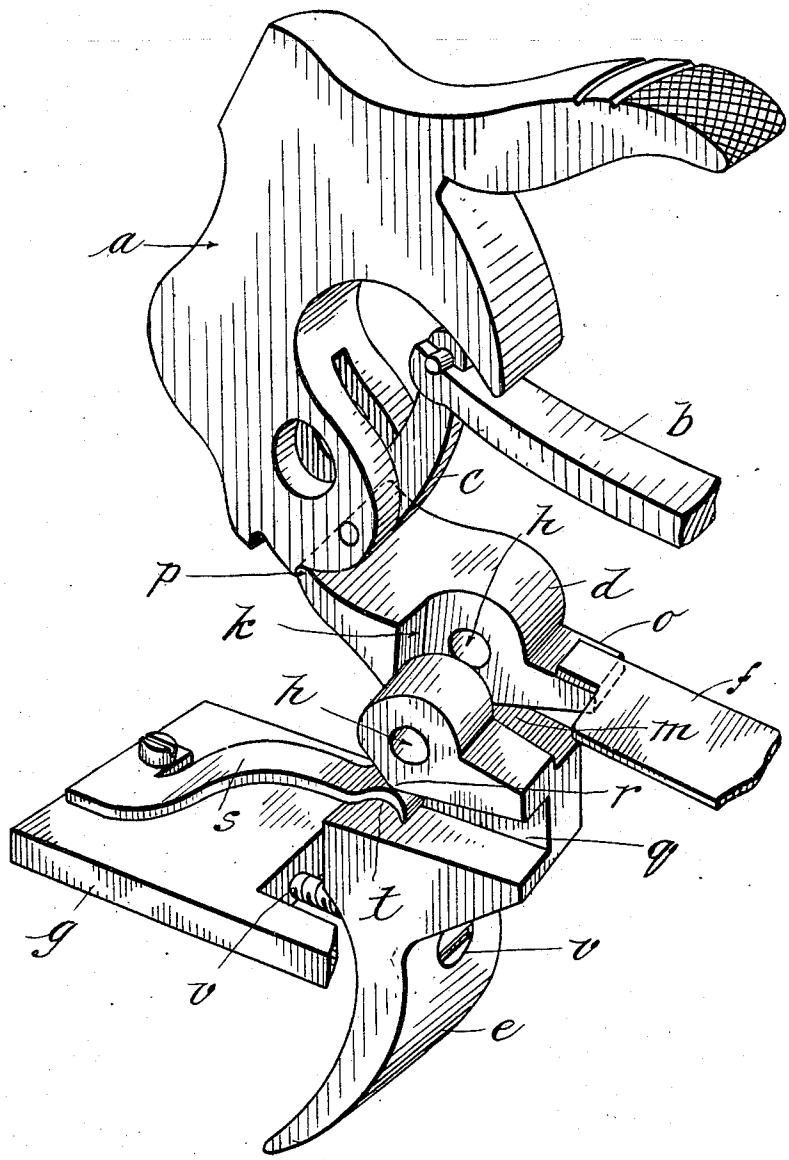
J. N. FISHER.

SET TRIGGER FOR FIREARMS.

APPLICATION FILED JAN. 26, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
H. L. Sprague
H. E. Bowen.

Inventor:
James N. Fisher
by Chadwick & Co.
Attorneys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

No. 852,942. PATENTED MAY 7, 1907.

J. N. FISHER.

SET TRIGGER FOR FIREARMS.

APPLICATION FILED JAN. 25, 1907.

2 SHEETS—SHEET 2.

Fig. 2.

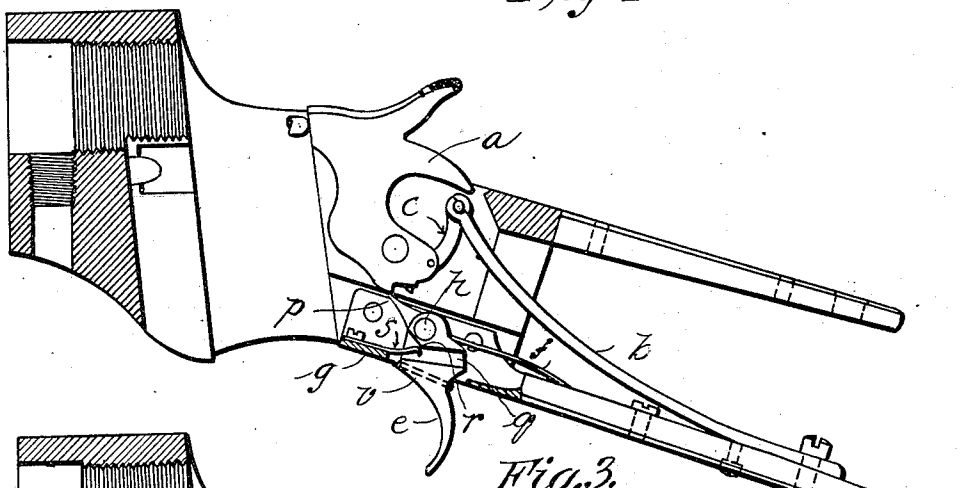


Fig. 3.

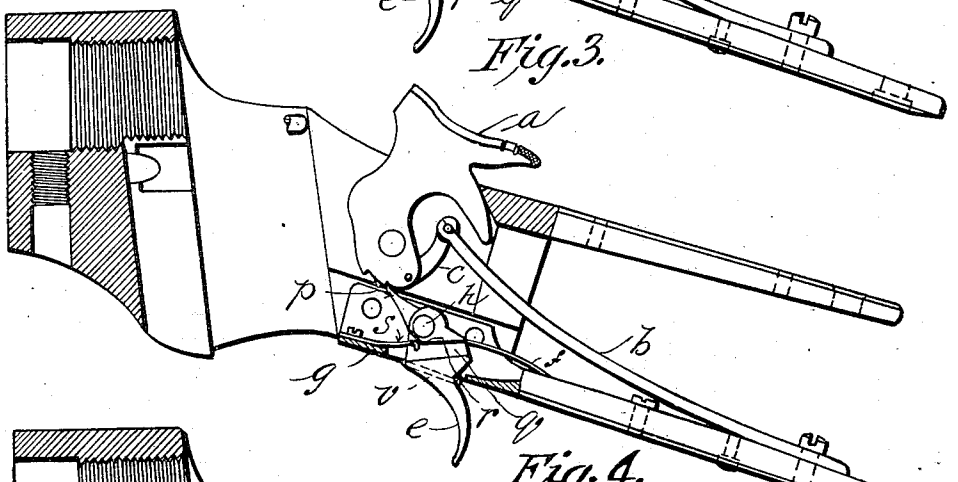
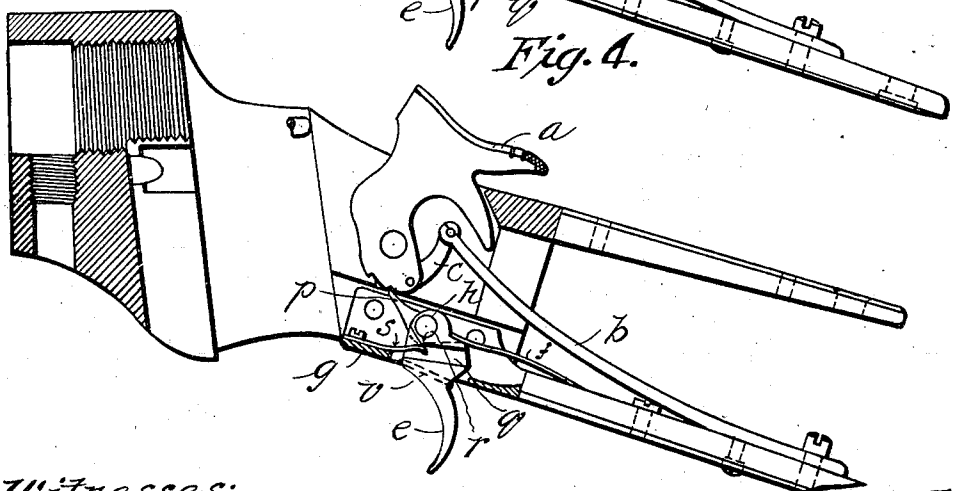


Fig. 4.



Witnesses:
H. L. Sprague
H. W. Bowen

Inventor.
James N. Fisher.
by Church & Co.
Attorneys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES N. FISHER, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO J. STEVENS ARMS & TOOL COMPANY, OF CHICOPEE FALLS, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

SET-TRIGGER FOR FIREARMS.

No. 852,942. Specification of Letters Patent. Patented May 7, 1907.

Application filed January 25, 1907. Serial No. 354,002.

To all whom it may concern:

Be it known that I, JAMES N. FISHER, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Set-Triggers for Firearms, of which the following is a specification.

This invention relates to firearms, the object thereof being to provide an improved construction of a set trigger.

The invention is fully illustrated in the accompanying drawings, in which,

Figure 1 is a perspective view of so much of the lock mechanism as is required to show the application of the invention thereto, the parts being shown on an enlarged scale, and certain of the parts in separated relation to the others to more clearly illustrate the particular construction of the parts in which the invention resides. Figs. 2, 3, and 4 are like views, viz.,—longitudinal sectional elevations of the frame of a firearm to which the invention has been applied,—Fig. 2 showing the hammer down and the trigger parts in the position they occupy when the trigger is to be used with the normal pull, that is with the trigger-setting means inactive,—Fig. 3 showing the same parts in the position they would occupy with the hammer at full cock when the trigger is to be used with the normal pull, and Fig. 4 showing the same parts in the position they would occupy when the hammer is at full cock and the trigger has been set to be released under a reduced pull.

Referring now to Fig. 1, *a* indicates the hammer; *b* the main-spring connected with the hammer by the usual stirrup *c*. The sear is indicated by *d*, the trigger by *e* and the combined sear and trigger-spring by *f*, a part of the frame being indicated by *g*. The novelty of this construction resides specifically in the construction of the sear and trigger and the parts associated with the latter, as will be fully hereinafter described. The sear and the trigger have a common axis, this being a screw or pin (not shown) passing through the holes *h* in the sear and trigger, the pin being supported in the frame in the usual manner. The trigger and the sear are halved together by cutting away the sear, as at *k*, and by cutting away the contiguous side of the trigger to the end that when these parts are put together their sides will be substantially flush. This is merely an advantageous construction as it permits the location of these parts in a narrower cut in the frame and brings the part *m* of the trigger beneath the rearwardly extending part *o* of the sear to the end that when the trigger is pulled, its swinging movement on its pivot-pin brings the surface *m* of the trigger up against the under side of the sear throwing the forward end *p* of the sear out of engagement with the notch in the hammer, allowing the latter to fall as usual. The trigger-spring *f* bears only on the rearwardly extending portion *o* of the sear and swings the trigger forward in the usual manner after it has been pulled.

It will be observed that the trigger may swing on its pivot-pin, as described, relative to the sear, permitting the trigger to be swung forwardly farther than the pressure of the trigger-spring *f* thereon would naturally swing it, but as the forward end of the sear bears against the breast of the hammer, it will limit the degree of forward swinging movement of the trigger under the action of the trigger-spring alone, but the trigger may be pushed beyond this point, as hereinafter described, and thus effect the separation of the surface *m* of the trigger from the under side of the rear end of the sear.

In the outside of the trigger, as shown in Fig. 1, a slot *q* substantially parallel with the frame-part *g*, is milled of such form as to provide a tapered projection *r* extending into this slot at a point beneath the axis of the trigger and a short distance back of a vertical line let fall from the axis; and on the frame-part *g* is a short and relatively stiff spring *s* having a rounded end *t*, the convex side of which bears against the projection *r*.

Fixed in the trigger is a screw *v* which may be turned in and out toward the frame-part *g*, and the contact of its point with the latter serves to limit the forward swinging movement of the trigger.

Before the trigger is swung forwardly by the thumb beyond the point to which it would naturally be moved by the trigger-spring, the bearing of the rounded end of the spring *s* is just a little to the left, as viewed in Fig. 1, or forwardly of the apex of the projection *r* on the trigger, and this will hold

the surface *m* of the trigger up against the rearwardly projecting part *o* of the sear so that the pull on the trigger will be immediately effective to disengage the nose of the sear *d* from the notch in the hammer. This is the position and action of the parts when the trigger is used under normal conditions, that is under the normal pull of three or four points, or whatever it may be: But when it is desired to set the trigger so that it may be released by a mere touch of the finger, it is swung forwardly by the thumb and the apex of the projection *r* will then ride up far enough onto the rounded convexed end *t* of the spring *s* to hold the trigger in this position by the pressure of the spring *s*, the degree of its swing being, as heretofore stated, limited by the screw *v*. This forwardly swinging movement of the trigger effects the separation of the surface *m* from the under side of the rearwardly extending projection *o* of the sear, and therefore the degree of force required to pull back the trigger is only that which is required to swing the projection *r* away from the end of the spring *s* whereupon as soon as the apex *r* reaches the downwardly curved part of this curved end of the spring *s*, the tension of the spring serves to snap the trigger back sharply, causing the surface *m* thereof to strike the under side of the part *o* on the sear with a slight hammer-like blow which releases the nose of the sear from the notch in the hammer.

The trigger may be set "fine" or "coarse" as it is termed, by permitting it, through the adjustment of the screw *v*, to swing far enough to bring the apex of the projection *r* more or less forwardly of the highest point of the curved end of the spring *s*.

In Figs. 2 and 3, the position of the parts is shown as they would be when the trigger is used under the full normal pull, these figures showing the hammer down, and raised to full cocked position respectively,— both figures showing that in these positions the spring *s*, by its contact with the beveled surface forwardly of the projection *r*, merely serves to hold the trigger in contact with the rearwardly extending part of the sear.

Fig. 4 is the same as Fig. 3, except that the trigger has been swung forwardly into set position, this view showing by the dotted lines the separation between the surface *m* of the trigger and the rearwardly extending part *o* of the sear, and it shows also the position of the projection *r* relative to the curved end of the spring *s*.

What I claim is:—

The combination with the hammer of a firearm, of a sear and a trigger having a common axis, the trigger having a swinging movement on its axis relative to the sear and normally bearing against the rear end of the latter; a spring secured to the frame, the free end of which is rounded and extends toward the trigger, there being a slot in the trigger to receive the free end of the spring, and a projection extending into the slot against which the rounded end of the spring bears, whereby when the trigger is pressed forward a part thereon is separated from the sear and constitutes a hammer to release the sear upon the release of the trigger, together with means to limit the forward swing of the trigger.

JAMES N. FISHER.

Witnesses:
K. I. CLEMONS,
H. W. BOWEN.