No. 859,990. PATENTED JULY 16, 1907.

M. STERN.

REVOLVER.

APPLICATION FILED FEB. 14, 1907.

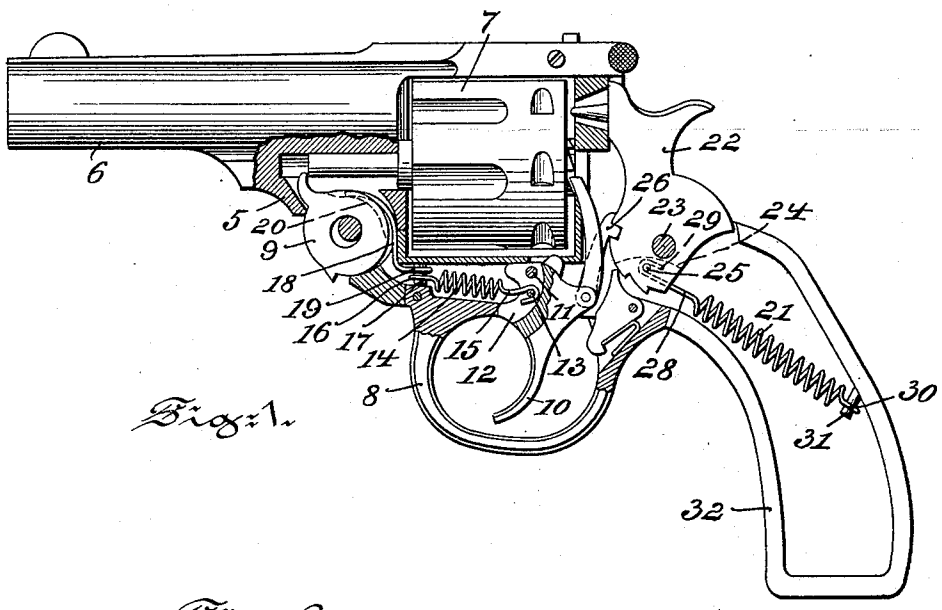


Fig. 1.

Fig. 2.

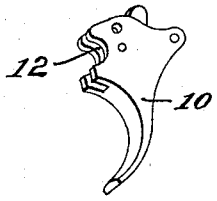


Fig. 3.

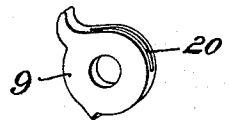
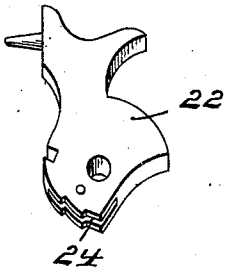


Fig. 4.



WITNESSES:

Wilhelm Voigt

Thomas M. Smith.

INVENTOR

Maurice Stern,

BY

J. Walter Douglas,

ATTORNEY.

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

UNITED STATES PATENT OFFICE.

MAURICE STERN, OF PHILADELPHIA, PENNSYLVANIA.

REVOLVER.

No. 859,990. Specification of Letters Patent. Patented July 16, 1907.

Application filed February 14, 1907. Serial No. 357,346.

To all whom it may concern:

Be it known that I, MAURICE STERN, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Revolvers, of which the following is a specification.

My invention has relation to revolvers; and in such connection it relates more particularly to the construction and arrangement of springs for the same.

The principal objects of my invention are, first, to provide a revolver with a trigger-spring which is supported by the frame and trigger so as to relieve all pressure from the guard heretofore serving as a support for the same, and thus preventing inaction of the trigger-spring whenever the guard becomes displaced; second, to provide a trigger-spring, which through wear, or due to improper length, does not bind or become disconnected from the trigger, as is the case in the leaf springs heretofore used, thus preventing the trigger-spring from becoming inoperative, after a limited use; third, to provide for such purpose, the revolver with a coiled spring which offers an even resistance to the movement of the trigger, and to so connect the spring with the trigger as to prevent side friction or jamming between the trigger and the bolt serving as a fulcral point, for the same; fourth, to provide the revolver with a guard, which merely serves as cover for the trigger and which, when removed, permits of free access to the trigger-spring, and a trial of the operation of the spring prior to the placing of the guard in position; fifth, to provide the revolver with a wire spring for returning the ejector-cam to its proper position, which, consisting wholly of tempered wire, is more uniform in its action, and will not readily break; and sixth, to provide the revolver with a grooved ejector-cam which maintains the free end of the ejector-spring in its proper position thereon.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings forming part hereof, in which

Figure 1 is a view, illustrating partly in side elevation and partly in section, a revolver, showing the arrangement and connection of a wire spring with the frame and trigger, a wire spring with the grooved ejector-cam and a main spring with the handle and hammer, as well as a slot arranged in the trigger and hammer for receiving and guiding the ends of the respective springs to permit of free movement of the hammer and trigger by engaging the same at a point below their fulcral points and centrally thereto, all embodying main features of my said invention; and Figs. 2, 3 and 4 are detail view, illustrating perspectively, the trigger, ejector-cam and hammer.

Referring to the drawings 5, represents the frame of the revolver which supports the barrel 6, cylinder 7, guard 8, and ejector-cam 9. To the frame 5, by means of a bolt 11, is pivotally secured the trigger 10, which is provided with a slot 12, arranged centrally in the trigger 10, and at a right angle to the bolt 11, thereof. Below the bolt, 11, the trigger 10, is provided with a second bolt 13, extending through the slot 12, thereof, and serving to support the hooked arm 15, of a coiled trigger-spring 14, the other bent end forming an eye 16, engaging a post 17, secured to the frame 5. The trigger-spring 10, is made of an even tempered steel wire of uniform thickness, which wire renders the same more elastic, and thus more durable, as the pressure exerted on the spring is evenly distributed over the coiled portion of the same.

By supporting the spring by the frame 5, and trigger 10, the spring is visible, thus permitting a trial of the operation of the spring 10, before placing the guard 8, in position. Moreover, the guard 8, serving merely as a cover for the spring 14, does in no way interfere with the proper operation of the spring, when becoming displaced. By permitting the arm 15, of the spring 14, to engage the trigger 10, at a point located directly in a central vertical plane thereof, a binding of the trigger on its supporting bolt 11, is overcome, which binding produces rapid wear between the trigger and bolt; and moreover, produces a sudden increase in friction, when the trigger is manually operated. Such increase in friction effectually interferes with taking and maintaining a steady aim. By the connection of the spring 14, with the trigger 10, and by its outline, the resistance offered to the movement of the trigger 10, by the spring 14, is an even one, which in no way interferes with the maintenance of a steady aim. Furthermore, by disengaging the eye 16, of the spring 14, the hooked arm 15, thereof, can readily be brought out of engagement with the trigger bolt 13, and just as quickly brought into re-engagement therewith, and with the post 17. The eye 16, of the spring 14, by being held under tension in engagement with the post 17, also serves to support and to hold the eye portion 19, of the ejector-cam spring 18, in position on the post 17. The cam spring 18, consists likewise of tempered steel wire of uniform thickness, which insures uniformity in the resistance offered, and will thus not readily break. In order to hold the free upper end of the cam spring 18, in proper or operative position on the cam 9, the same is provided with a groove or depression 20, as shown in Figs. 1 and 3. The spring 18, being thus held in position at its upper and lower ends, will effect at all times, the return of the ejector-cam 9, to its proper operative position. The arrangement and connection of the cam spring 18, with the post 17, also permits of a ready insertion and removal of the same after the guard 8, is disengaged from the frame 5, and the eye 16, of the trigger-spring 14, removed from the post 17.

The hammer spring 21, used to actuate the hammer

22, in its construction and outline, does not differ materially from the spring shown and described in an application for a patent granted to me, under date of February 26th, 1907, Ser. No. 327,995. However, its connection with the hammer 22, as will be hereinafter described, eliminates any possible binding, and thus rapid wear between the hammer and its supporting bolt 23, or of increased resistance to movement due to such binding. Such increase and uneven resistance on the part of the hammer 22, will naturally prevent the even action of the trigger 10, due to the spring 14, since the hammer, by means of the lifter 26, is connected with the trigger 10. To guard against any possibility of uneven action on the part of the hammer 22, the same at its lower end is provided with a slot 24, arranged in a central vertical plane of the same. Through the hammer 22, and the slot 24, thereof, is passed below the bolt 23, a second bolt 25, which is arranged in advance of the bolt 23 and serves as a fulcral point for the hook-shaped end 29, of the arm 28, of the hammer spring 21. By engaging the hammer 22, directly in a vertical central plane and below and in advance of its fulcral point 23, the spring 21, will outside of decreasing the pressure of the spring when the hammer is raised by moving the arm 28 thereof, towards the bolt 23, and increasing this pressure when the hammer descends by moving the arm away from the bolt 23, prevent any undue friction between the hammer and bolt, when the hammer is lifted against the tension of the spring 21, by the lifter 26, actuated by the trigger 10. The spring 21, at the end opposite the arm 28, terminates in a bent or eye portion 30, engaging a post 31, which is secured to the frame 5, and forming a portion of the handle 32, of the same.

Having thus described the nature and objects of my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a revolver, a frame, a hammer, a trigger, a lifter connecting the trigger with said hammer, said trigger having a slot arranged in a vertical central plane thereof, a bolt connecting the trigger with said frame, a second bolt arranged below said connecting bolt and passing through the slot of said trigger, a spring having a coiled portion connected with said frame, and an arm extending into the slot of said trigger and engaging the second bolt of the same, said spring adapted by engaging the second bolt of said trigger, and extending into the slot of the same to insure an even movement of said trigger on said supporting bolt.

2. In a revolver, a frame, having a post, an ejector-cam and a trigger carried by said frame, a spring engaging the post of said frame and trigger, a second spring engaging said cam and having an eye engaging said post intermediate of said first spring and frame, and said first spring arranged to hold said second spring in position on said post.

3. In a revolver, a frame, a hammer having a slot arranged in a central vertical plane thereof, a bolt connecting the hammer with said frame, a second bolt passing through the slot of said hammer and arranged below and in advance of said connecting bolt, a spring, consisting of a wire bent to form a coiled or resilient portion engaging said frame and an arm or connecting portion for engaging said hammer by extending into the slot and engaging the second bolt thereof.

4. In a revolver, a frame, a post carried by said frame, a trigger, a hammer, the trigger and the hammer each having a slot arranged in a central vertical plane thereof, and bolts pivotally connecting the same with said frame, a bolt passing through the slot of said hammer and arranged below and in advance of the connecting bolt thereof, a bolt passing through the slot of said trigger and arranged below the connecting bolt thereof, a lifter carried by said trigger and connecting the same with said hammer, a spring supported by said post and trigger, said spring, consisting of a wire bent to form a coiled portion terminating in a hook and an eye, the hook engaging the bolt carried by the trigger and the eye engaging the post, a second spring for automatically actuating the hammer, said spring, consisting of a wire bent to form an arm for engaging the bolt carried by said hammer, and an eye for engaging the frame and a coil for connecting the arm with said eye, the bolt carried by said hammer arranged when the same is raised by the trigger and lifter to swing the arm of the second spring towards said connecting bolt.

5. In a revolver, a frame, a post carried by said frame, an ejector cam, a trigger having a slot, a bolt connecting said trigger with said frame, a bolt carried by said trigger and passing through said slot, a spring, consisting of a wire bent to form a coiled portion having a hook and an eye, the hook engaging the bolt carried by said trigger and the eye engaging said post, a second spring, consisting of a wire bent to form a curved portion and an eye, the curved portion engaging said cam and the eye engaging said post intermediate of said first spring and frame so as to be held in position on the post by said first spring, a hammer having a slot, a bolt pivotally connecting said hammer with said frame, a bolt carried by said hammer and passing through the slot thereof and arranged below and in advance of said connecting bolt, a third spring for automatically actuating said hammer, said spring, consisting of a wire bent to form an arm for engaging the bolt carried by said hammer, and an eye for engaging the frame and a coil for connecting the arm with said eye, the bolt carried by said hammer arranged when the same is raised by the trigger and lifter to swing the arm of the second spring towards the connecting bolt.

In witness whereof, I have hereunto set my signature in the presence of two subscribing witnesses.

MAURICE STERN.

Witnesses:
GEO. W. REED,
THOMAS M. SMITH.