

G. M. STONE.
SELF COCKING REVOLVER.
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933,797.

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Fig. 1.

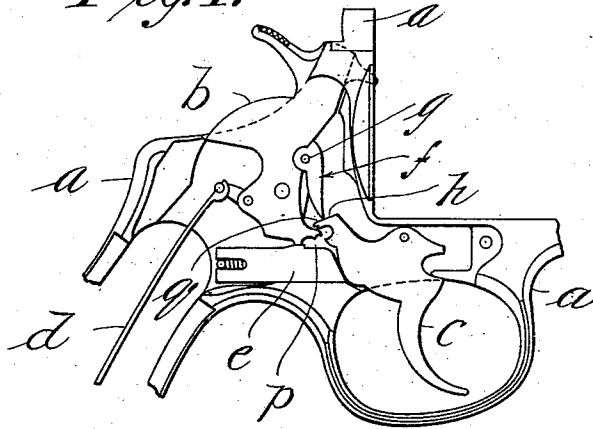
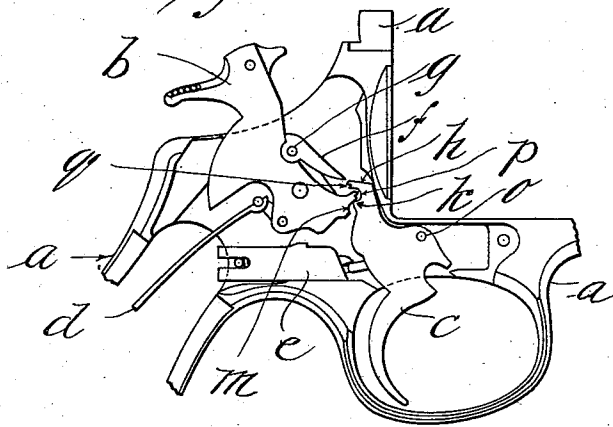


Fig. 2.



WITNESSES:

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SELF-COCKING REVOLVER.

933,797.

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To all whom it may concern:

Be it known that I, CHARLES M. STONE, a citizen of the United States of America, residing at Agawam, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Self-Cocking Revolvers, of which the following is a specification.

This invention relates to firearms and particularly to an improvement in revolvers, the object of the invention being to provide a construction in self-cocking revolvers whereby when the hammer is cocked by the movement of the trigger the backward throw of the hammer will be through a longer arc than in revolvers as generally constructed at present; and, furthermore, as the hammer nears the end of its backward movement, and as the main spring tension or resistance increases, the point of engagement between the trigger and hammer is shifted whereby during the final backward movement of the latter, the leverage of the trigger against the hammer is shortened to the end that at the time when the main spring resistance is the greatest, the power required to compress said spring will, by the change of leverage above referred to, be lessened: Furthermore, the easy actuation of the hammer during its final movement is enhanced because when the shifting of the point of engagement between the trigger and the cocking lever takes place, the last point of engagement is substantially in a straight line drawn between the pivots of the hammer and trigger.

The invention is clearly illustrated in the accompanying drawings, in which,—

Figure 1 is a side elevation of the lock mechanism of a revolver in which the invention is embodied, the hammer being down. Fig. 2 is a view similar to Fig. 1, the hammer being thrown back to near the limit of its backward movement.

Referring to these drawings, *a* indicates the frame of the revolver; *b* the hammer; *c* the trigger, and *d* the main-spring. A hammer-retracting device *e* is also embodied in the drawings but forms no part of the present application.

A hammer-cocking lever *f* is secured pivotally to the forward edge of the hammer at *g*, its lower end being held away from said edge by a spring (not shown). This cocking-lever is a feature common to self-cocking

revolvers as at present generally constructed its lower extremity, as shown in Fig. 1, being located close to a flattened portion *h* on the upper end of the trigger against which it comes to a bearing when the trigger is retracted to cock the hammer.

In ordinary practice the backward throw of the hammer is limited by the engagement of the lower end of the cocking lever with the surface *h* on the trigger, and when the disengagement of these parts occurs the hammer falls. The present invention, however, provides for a backward movement of the hammer imparted thereto by the trigger in excess of the degree of movement attainable by the engagement of the cocking lever *f*, and the trigger, as above described, which excess of movement is effected preferably by providing the rear edge of the trigger with a projection *k* which is so located as to engage a recess *m* formed in that part of the lower edge of the hammer which is in proximity to the trigger when the hammer approaches the full cocked position, the engagement of the projection *k* with said recess *m* taking place at or about the moment of the disengagement of the lower end of the cocking lever *f* with the surface *h* on the upper end of the trigger.

Inasmuch as the projection *k* on the trigger is nearer the pivotal point *o* of the latter than is the surface *h*, it is clear that the leverage between the trigger and the hammer is shortened when the projection engages the recess in the hammer, and the leverage on the hammer proportionately increased, that is the point of engagement is nearer the pivotal point of the trigger. The obvious result of this construction is that at the moment when the tension or resistance of the main spring *d* approaches maximum, the point of leverage between the trigger and the hammer is shifted nearer to the pivotal point of the trigger in such a way that the force, as applied to the trigger to retract the hammer, will be less than would be required if the disengagement between the upper end of the trigger and the lower end of the cocking lever *f* had not been effected. This reduction of the force required to retract the hammer results in a very much smoother action when the arm is being fired by the movement of the trigger. Furthermore, by thus shifting the

point of engagement between the trigger and hammer as above described, means are provided whereby the hammer may be given a backward throw greater than can be effected by means of the cocking lever and trigger alone.

In addition to the above advantages the location of the projection on the trigger which engages with the recess in the hammer, substantially in a straight line drawn between the axes of the hammer and trigger, results in the most advantageous application of power to the hammer. In the present application, the projection *h* is shown and described as located on the trigger, and the recess *m* as being in the edge of the hammer, but any construction embodying a reversal of these locations is deemed to be an equivalent of the construction forming the subject matter of this application.

When the hammer is cocked by the thumb of the operator, a narrow edge on the hammer, at *p*, engages the notched end of the trigger at *q*, the lip, whose edge *p* thus engages the trigger, constituting the upper border of the recess *m* above referred to.

What I claim, is:—

1. In a self-cocking revolver, a hammer, a trigger, a spring to actuate the hammer, a lever on the hammer, the hammer being

provided with a recess in the lower portion thereof, a trigger located in operative relation to the hammer provided with a flattened portion, a notched end, and a projection on the rear edge thereof, whereby as the hammer approaches full cock position and the spring is approaching its greatest tension, the leverage of the trigger against the hammer may be shortened prior to the release of the hammer by the trigger.

2. In a self-cocking revolver, a hammer, and a main-spring therefor, and a cocking lever on the hammer; a trigger to engage the cocking lever at the beginning of the cocking movement, and means on the trigger to engage the hammer at a point below the end of the cocking-lever near the end of the cocking movement.

3. In a self-cocking revolver, a hammer, a trigger, and a main spring connected with the hammer, the trigger having two successive points of engagement with operative parts of the hammer during the cocking movement, the second point of engagement being nearer to the pivotal point of the trigger than the first point of engagement.

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Witnesses:

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