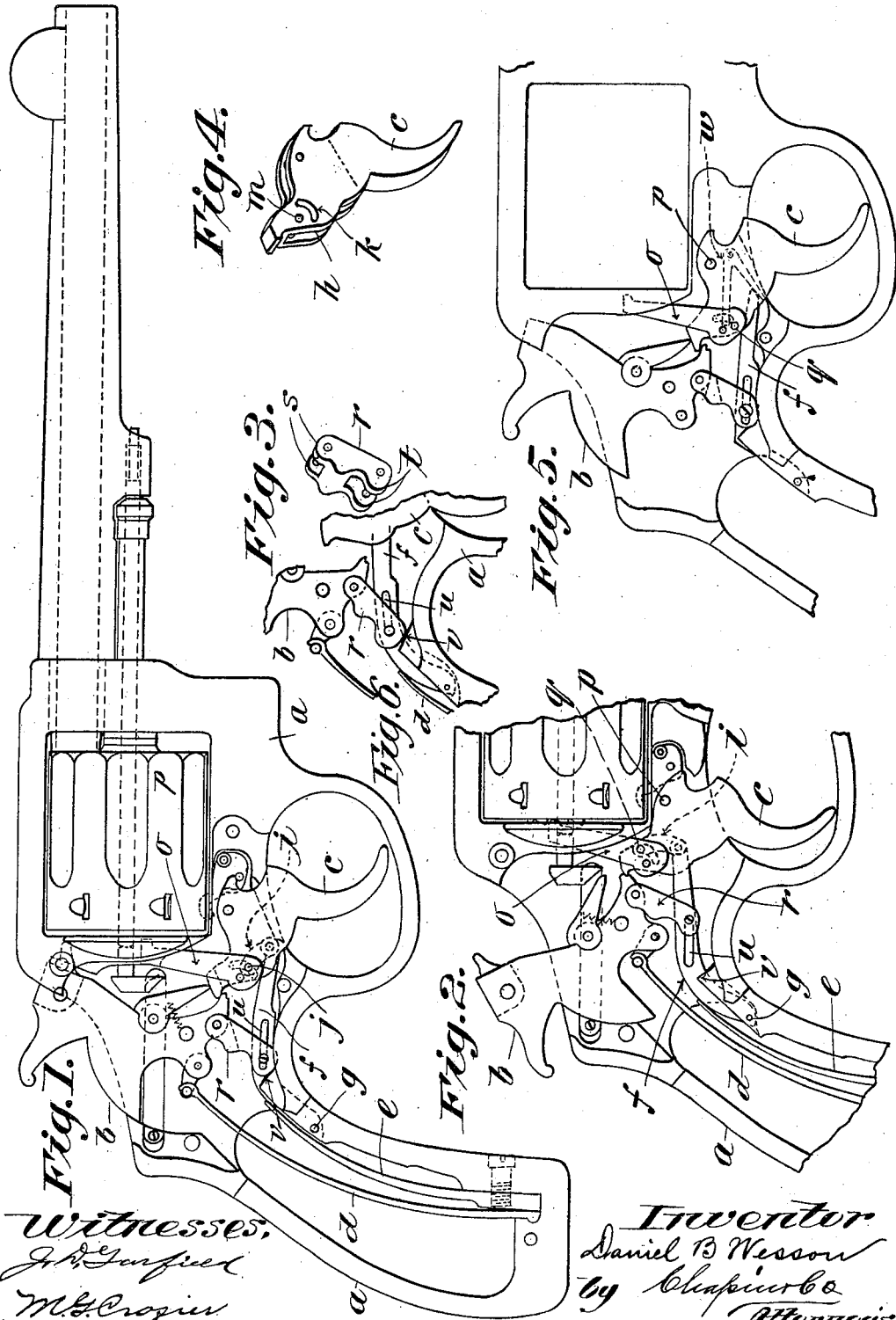


D. B. WESSON.  
REVOLVER.

APPLICATION FILED DEC. 10, 1903.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

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## REVOLVER.

SPECIFICATION forming part of Letters Patent No. 763,581, dated June 28, 1904.

Application filed December 10, 1903. Serial No. 184,701. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL B. WESSON, 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 Revolvers, of which the following is a specification.

This invention relates to revolver constructions, the object thereof being to improve the construction forming the subject of United States Letters Patent issued to Joseph H. Wesson on August 14, 1900, No. 655,844, and on September 2, 1902, No. 708,437. In these said prior constructions one spring, which acts as a trigger-spring, a spring to hold the hand in operative position and to effect the rebound, is shown. This spring bears directly on the hand and trigger and the arm whereby the rebound of the hammer is effected. This spring must of necessity be so located as to pass to one side of the hammer, bearing on the trigger at one side thereof and on the rebounding device at one side thereof, which position is unfavorable to the smooth action of the mechanism of the arm owing to the side strains to which the parts actuated by the spring are subjected. In the construction forming the subject-matter of this application this objectionable feature of the said prior constructions has been overcome; and the invention consists in the improvement described in the following specification, and clearly pointed out in the claims forming part thereof.

In the drawings forming part of this application, Figure 1 is a side elevation of a revolver constructed according to my invention, the side plate and cheek-piece of the grip being removed. Fig. 2 is a similar view of the lock mechanism of the revolver shown in a different position. Fig. 3 is a perspective view of an arm connected with the hammer to effect the rebounding of the latter. Fig. 4 is a perspective view of the trigger. Fig. 5 is a view of the lock mechanism similar to that shown in Fig. 1 embodying a slight modification in the construction of the mechanism of the parts whereby the hand is operated. Fig. 6 is a side elevation of some of the parts

of Fig. 1, showing them in the position they occupy just before their operation whereby the rebound of the hammer is effected.

Referring now to the drawings, *a* indicates the frame of the revolver, in which is hung the hammer *b*, the trigger *c*. The hammer is provided with the usual mainspring *d* and the trigger with the trigger-spring *e*, which in addition to this function is the means for effecting the rebound of the hammer. This spring *e* is secured in the butt of the grip and extends upward toward the heel of the hammer, terminating at a point somewhat below it when the hammer is down. The free end of the spring bears against the upper side of the arm *f*, which is pivoted to the frame at *g*, the forward end of the arm extending forward to the trigger and entering a slot *h*, (see Fig. 4,) milled in the edge of the trigger and extending through the upper part thereof parallel with the sides. Attached to the forward end of the arm *f* and located in this slot *h* in the trigger is a link *i*, which is shown only in dotted lines in Figs. 1 and 2 of the drawings. In the upper end of this link is a pin *j*, located transversely of the link and extending through a slot *k*, formed in the wall of the trigger, which slot is concentric with the pivotal point *m* of the hand *o*, the pin *j* extending beyond the side of the trigger and into the side of the hand. The trigger is pivoted in the frame on the pin *p*.

Assuming that the parts are in the position shown in Fig. 1, if the trigger be pulled to cock the hammer the hand will be raised, rotating the cylinder in the usual manner, and the link *i*, pivotally connected as it is with the free end of the arm *f*, simultaneously swings the latter upward, following the movement of the trigger, and the spring *e* by this movement of the arm *f* is put under a tension against which the trigger is pulled back, and the fact of the connection between the end of the arm *f* and the trigger through the medium of the pin *q* and the hand forwardly of the pivotal point of the hand keeps the latter always in yielding engagement with the ratchet on the cylinder. By means of this

construction all of the strains incidental to the action of the parts just described are so distributed to the various pivotal points of those parts that no side strain at said pivotal points will be possible through which any binding can take place.

The mechanism just described is entirely operative disassociated from the rebounding mechanism shown in connection therewith in the drawings; but its most practical application lies in its use in connection with said rebounding mechanism, and it is in combination therewith that it will generally be used.

The construction whereby the greater ease of operation of the above-described parts is attained may be attained also in the operation of the rebounding mechanism, and the latter will now be described.

In principle the rebounding of the hammer is effected in substantially the same manner as in the patents to Joseph H. Wesson, above referred to; but whereas in said patents the arm corresponding to the arm *r* shown herein was hung on the side of the hammer in this construction I make it as shown Fig. 3, and as thus made the upper end of said arm is divided and made to receive the lower edge of the hammer between the two arms *s*, the lower end of the arm being milled out in the same manner, resulting in the formation of the two arms *t*, which embrace between them the arm *f*. By a suitable pin the arm *r* is then pivotally secured to the hammer, and by another pin in the lower end thereof said arm engages the arm *f*, in which there is a longitudinal slot *u*, so located as to permit the lower end of the arm *r* to have the necessary freedom of movement to follow the movement of the hammer when the latter rises and falls. When the latter operation takes place upon the pulling of the trigger, the lower end of the arm *r* slides back to the position shown in Fig. 6, somewhat above the abutment *v* on the frame, until pressure on the trigger is released, whereupon the reaction of the spring *e* will force the rounded lower end of said arm *r* against the abutment, thereby forcing the lower end of the hammer forward, retracting the nose of the hammer as in all rebounding mechanisms. By means of this construction of the rebounding mechanism all side strain is removed from the pivot of the hammer because of the location of the arm *r* in the same plane as the hammer, and the arm *r*, located as it is, is much more easily operated to effect the rebound than in the construction described in said prior patents. Furthermore, aside from the advantages of the location of the parts described herein in the plane of the hammer and trigger, a further advantage is derived in doing away with the form of spring rendered necessary by the prior

constructions above referred to, that spring being a troublesome one to make and of necessity being so long as to necessitate making it relatively quite stiff in order to do its work properly.

By means of the improvements herein described a much smoother action of the revolver mechanism is attained.

In Fig. 5 is shown a slight modification of the construction shown in Figs. 1 and 2 of the manner of connecting the arm *f* with the hand. In this modification no change in the manner of supporting the hand on the trigger is made, but instead of connecting the arm *f* with the pin *q*, projecting from the hand, by means of a link *i* a small two-armed lever *w* is pivotally mounted in the slot in the trigger near the forward edge of the latter, the two arms of said lever extending rearwardly, on the lower one of which the forward end of the arm *f* bears, the upper arm of said lever bearing on the pin *q*. This manner of connecting the arm *f* with the hand and the trigger insures the same result in the operation of the parts as in the construction shown in Figs. 1 and 2 and clearly falls within the scope of this invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a revolver, the trigger, the hand pivotally supported on one side thereof, a spring for the trigger, an arm pivoted by one end on the frame on which arm said spring bears, the opposite end of which arm extends toward the trigger and is located in a slot in the edge of the latter, a link also in said slot connected with the end of said arm, and with the hand, forwardly of the pivotal point of the latter, through an opening in the side of the trigger.

2. The combination with the frame of a revolver, of a hammer and trigger, a trigger-spring located back of the trigger not bearing directly thereon; an arm located between the spring and the trigger pivotally supported on the frame by one end, its opposite end having a bearing on the trigger; a second arm pivotally supported on the lower edge of the hammer and having a sliding engagement with the arm on which the trigger-spring bears, and an abutment on the frame against which the lower end of the arm on the hammer is pressed to rebound the hammer, by the action of the trigger-spring.

3. In a self-cocking revolver, a frame, a trigger and hammer, said trigger having a slot through its upper portion parallel to its side, a hand pivoted to the side of the trigger, a pin in the hand extending through an opening in the side of the trigger into said slot; a link in the slot pendent from said pin; an arm supported on the frame by one end and

connected with said link by its opposite end,  
a spring bearing on said arm, a second arm  
pivoted to the lower edge of the hammer to  
swing in the plane of the latter, the lower end  
5 of said arm having a sliding engagement with  
the arm on which said spring bears, and an  
abutment on the frame against which the lower

end of said hammer-connected arm may be  
pressed to effect the rebound of the hammer.

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