No. 769,277. PATENTED SEPT. 6, 1904.

O. W. RINGQVIST.

CYLINDER LATCH FOR REVOLVING FIREARMS.

APPLICATION FILED JULY 8, 1902.

NO MODEL.

Fig. 1.

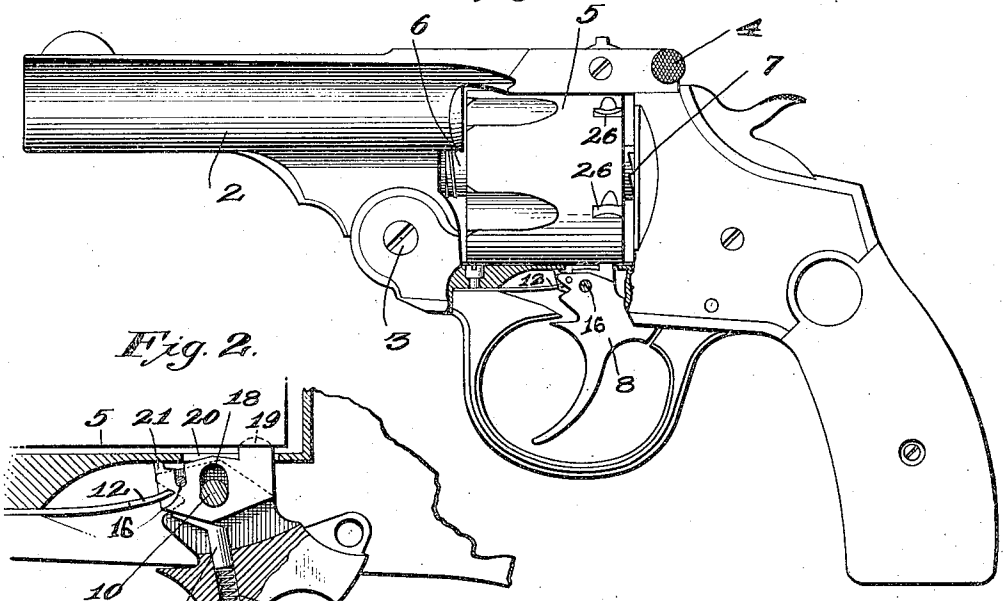



Fig. 2.

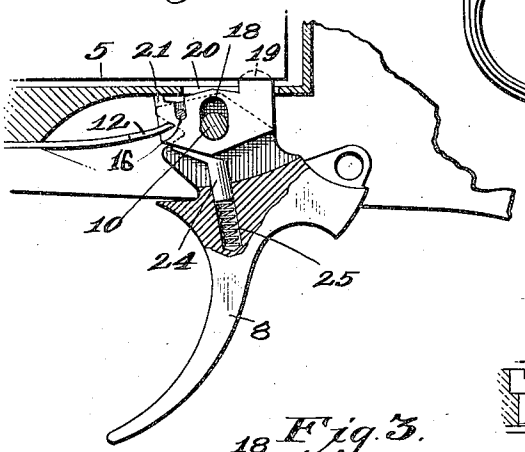



Fig. 4.

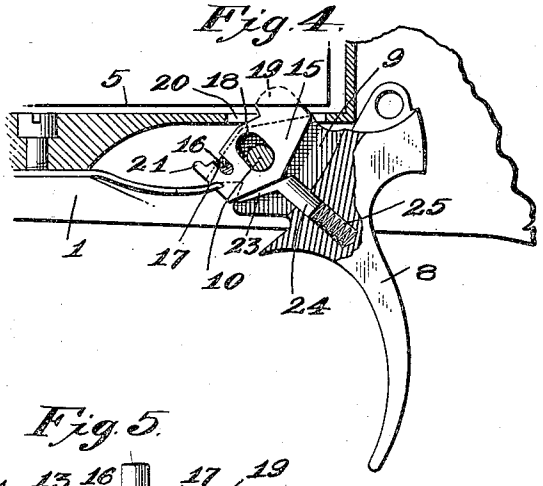



Fig. 3.

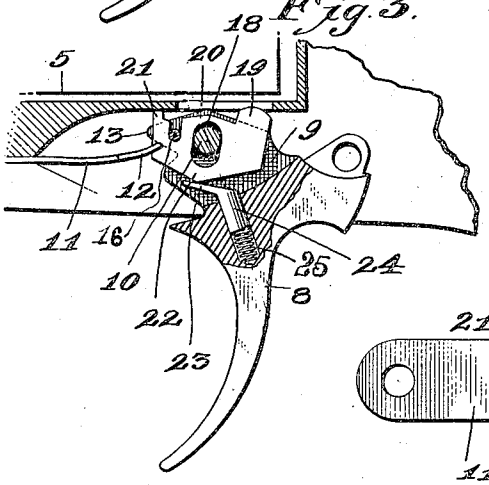
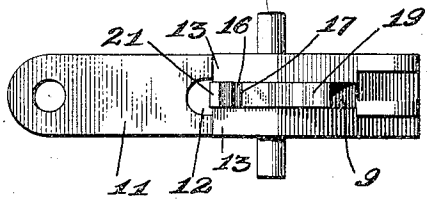



Fig. 5.




Witnesses
L. H. Horner.
M. M. Schuermann

Inventor
Otto W. Ringqvist
By Rufus B. Fowler
Attorney.

No. 769,277. Patented September 6, 1904.

# UNITED STATES PATENT OFFICE.

OTTO W. RINGQVIST, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR TO MARY ELIZABETH JOHNSON, OF FITCHBURG, MASSACHUSETTS.

## CYLINDER-LATCH FOR REVOLVING FIREARMS.

SPECIFICATION forming part of Letters Patent No. 769,277, dated September 6, 1904.

Application filed July 8, 1902. Serial No. 114,738. (No model.)

*To all whom it may concern:*

Be it known that I, OTTO W. RINGQVIST, a citizen of the United States, residing at Fitchburg, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Cylinder-Latches for Revolving Firearms, of which the following is a specification accompanied by drawings, forming a part of the same, in which—

Figure 1 is a view in side elevation of a revolver in its normal position, a portion of the frame beneath the cylinder being broken away to show the application of my improved latch thereto. Fig. 2 is an enlarged detailed view showing the trigger in its normal position with relation to the frame, parts being broken away to show the interior construction. Fig. 3 is a view of the same, showing the intermediate position of the parts. Fig. 4 is a similar view showing the trigger in the firing position; and Fig. 5 is a plan view of the trigger, latch, and blade-spring.

Similar reference-figures refer to similar parts in the different views.

The object of my present invention is to provide a lock for the cartridge-cylinder, which lock is controlled by the position and action of the trigger and adapted to retain the cylinder in position against moving during the two extreme positions of the trigger—that is to say, the normal position shown in Figs. 1 and 2 and the position of firing, as shown in Fig. 4—so that any possible lack of alinement between the cylinder-chamber and the barrel of the gun is precluded during the firing of the revolver or immediately thereafter, thereby retaining the discharged cartridge in the position of firing, so as to insure presenting the next cartridge to the barrel with the recocking of the firearm, of which there would otherwise be no certainty for the reason that it has generally or sometimes been customary to leave the cylinder unlocked when the trigger and hammer were in their normal position. Should it be desired to revolve the cylinder without breaking down the firearm, the trigger may be pulled to an intermediate position, and it is a part of my invention to provide for this, and therefore when the trigger is pulled midway between the extreme positions described the cylinder-latch is withdrawn from the path of the cylinder, as illustrated in Fig. 3, and the cylinder is free to turn while the parts are in this position.

Referring to the accompanying drawings, 1 represents the frame, and 2 the barrel, of the revolving firearm, they being hinged in the usual manner by the hinge-pin 3 and held together by the latch 4. The cylinder 5 is rotatably supported by means of the accustomed spindle 6, and this is positively turned by means of the usual dog (not shown) engaging the ratchet-teeth 7 on the rear of the cylinder with each cocking of the firearm, the dog also acting in the usual way to prevent a backward turn of the cylinder, even when the cylinder is otherwise unlocked, all of which is well known.

The numeral 8 denotes the trigger, which is bifurcated at its upper end, as at 9, and pivoted to the frame of the revolver by means of the pin 10 in the usual manner, a blade-spring 11, having a divided end 12, which bears upwardly upon the two shoulders 13 13, operating to normally throw the trigger forward, the opposite end of the blade-spring being secured, as shown in Fig. 1, between the frame and guard.

A feature of my invention comprises a latch 15, which is made of a flat piece of metal fitted to and confined between the parallel sides of the bifurcation 9 of the trigger, it being pivoted thereto by means of the pin 16, passing through the notch 17 in the latch and having an elongated orifice 18, which receives the pin 10 and gives the latch freedom of movement with respect to the trigger. This latch is provided with a tongue 19 at the rear end in position to move up and down through a mortise 20, formed in the frame of the firearm, and at its opposite end the latch is provided with a tailpiece 21 in position to bear against the frame, as indicated. At or near the center the latch widens vertically, as indicated at 22, to form a cam which may be angular, as shown, or might be differently shaped. Against this enlarged cam 22 the toe 23 of a spring-actuated slide-pin 24 bears at all times,

the spring 25 having the effect of forcing the pin upward, as indicated in the drawings, whereby to cause the proper action of the latch during the different positions of the trigger.

To briefly explain the operation, let us begin with the position of parts indicated in Figs. 1 and 2, (which is the same.) The parts are normal, the blade-spring 12 retaining the trigger in position and the spring 25 pressing upon the pin 24 and the toe-piece of the pin upon the forward end of the latch 15 to retain the latch as high as the length of the orifice 18, through which pin 10 passes, will admit, the latch being held by the tailpiece 21 against the frame of the revolver, the lower end of the orifice 18 against the pin 10, and the toe-piece 23 of the pin 24 bearing upwardly upon the lower edge of the latch at a point therebetween. This causes the tongue 19 to enter one of the notches 26 in the cylinder. Now as the trigger is pulled backward to fire the revolver or for other reasons it passes through the intermediate position, (indicated in Fig. 3,) the effect of which is to pull downward the portion of the trigger in which the pin 16 is located, the toe-piece 23 of the spring-actuated pin 24 sweeping over the cam portion 22 of the lower edge of the latch, the effect of which is to cause the rear end of the latch, with its tongue 19, to be carried downward out of the notch 26, the tailpiece 21 still rocking and bearing upon the frame of the revolver, thus releasing the cylinder, and during which release it may be rotated freely by hand, if desired, and also during which release at the further backward movement of the trigger the cylinder is turned automatically in the usual way until another chamber comes opposite the barrel. The further movemovement of the trigger backward swings the portion carrying the pin 16 farther downward and backward and the tailpiece 21 away from the frame, so that the latch again assumes its normal position with relation to the trigger, as shown in Fig. 4, with the tongue 19 extending up into the notch 26 of the cylinder or in position to enter one when it arrives in position in the turn of the cylinder to receive it. Should one of the notches fail to register with the mortise 20 and the tongue 19 shall have entered the latter, the tongue will simply strike the surface of the cylinder, the spiral spring 25 being sufficiently yielding to provide for this exigency and its tension being expended the moment the notch does arrive to throw the tongue thereinto. Thus it will be seen that the latch is in its normal position relative to the trigger in each of the extreme positions of the trigger, as indicated in Figs. 2 and 4, respectively, and the tendency of the spiral spring 25, when not resisted or hindered, is always to throw the latch into that normal position relative to the trigger; but in the intermediate position (indicated in Fig. 3) this tendency is resisted by the rocking of the latch out of position.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with the frame, cylinder and trigger of a revolving firearm, of a latch pivotally connected with the trigger at a point away from the pivot of the trigger, one end of the latch normally resting upon the frame of the firearm.

2. The combination with the frame, cylinder and trigger of a revolving firearm, of a latch having a tailpiece which normally rests against the frame, the latch having a notch, a closed slot and a tongue, a pin extending through the trigger and slot in the latch and a pin secured to the trigger and received by the notch in the latch.

3. The combination with the frame, cylinder and trigger of a revolving firearm, of a latch having a tailpiece which normally rests against the frame, the latch having a notch, a closed slot and a tongue, a pin extending through the trigger and slot in the latch and a pin secured to the trigger and received by the notch in the latch, and a spring-actuated pin in the trigger bearing against the latch.

4. The combination with the frame, cylinder and trigger of a revolving firearm, of a latch fulcrumed at or near one end to the trigger and provided with a tailpiece which normally rests upon the frame of the firearm, the latch provided at its opposite end with a tongue adapted to engage the cylinder and having an intermediate cam-surface on its lower edge, and a spring-actuated pin bearing upon the cam-surface of the latch.

5. The combination with the frame, cylinder and trigger of a revolving firearm, of a spring-pressed latch which normally bears at one end upon the frame and which has a tongue at the opposite end which is projected into the path of the cylinder when the trigger is in both its extreme positions.

6. The combination with the frame and cylinder of a revolving firearm, and a trigger pivoted thereto, of a latch pivoted to the trigger at or near one end of the latch, the latch having a cam on its lower edge about midway between its ends and a spring-actuated pin having a sliding connection with the trigger and provided with a toe-piece adapted to bear upon the cam and between the cam and the pivoted end of the latch, said latch having a tongue at one end adapted to engage the cylinder and a tailpiece at the other end in position to strike the frame of the firearm, substantially as described.

Dated this 27th day of June, 1902.

OTTO W. RINGQVIST.

Witnesses:

M. M. SCHUERMANN,

RUFUS B. FOWLER.