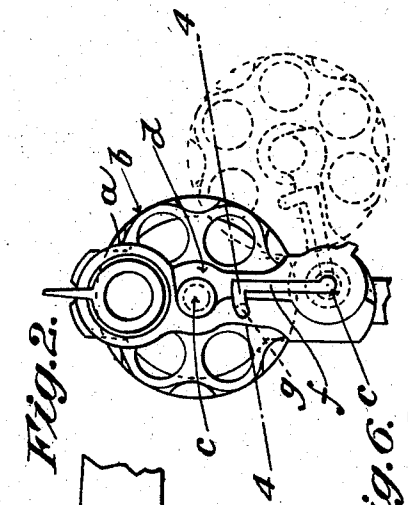
No. 702,607. Patented June 17, 1902.

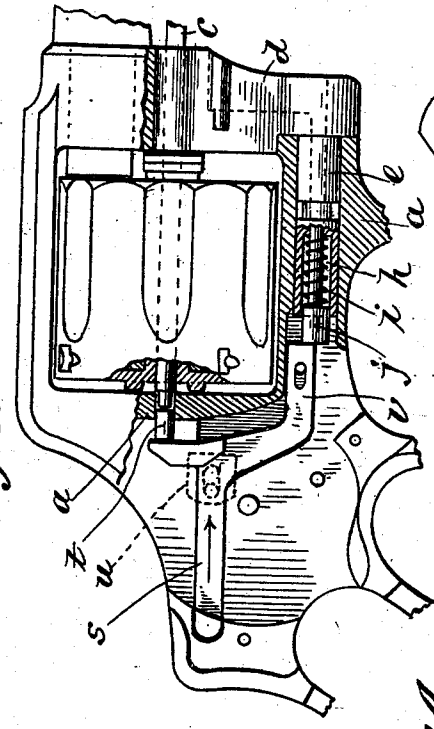
J. H. WESSON.

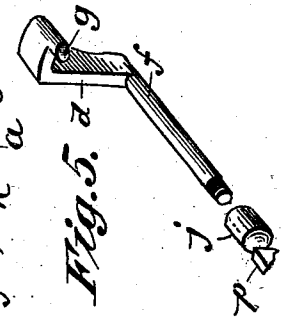
REVOLVING FIREARM.

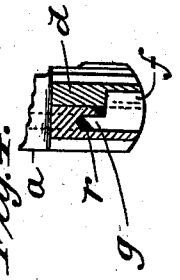
(Application filed Jan. 2, 1902.)

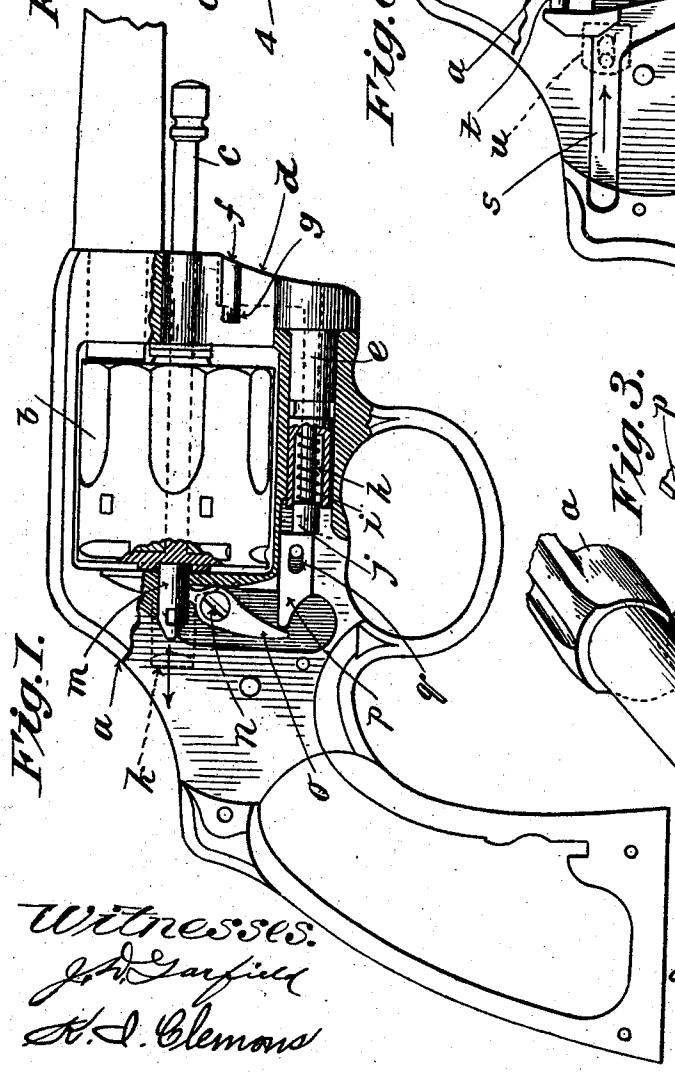
(No Model.)

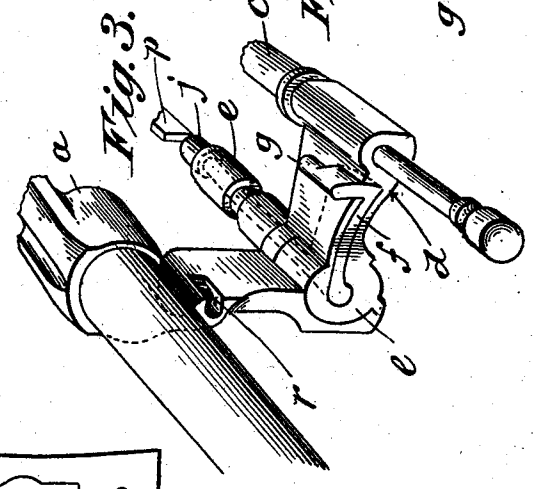












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UNITED STATES PATENT OFFICE.

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REVOLVING FIREARM.

SPECIFICATION forming part of Letters Patent No. 702,607, dated June 17, 1902.

Application filed January 2, 1902. Serial No. 88,156. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. WESSON, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Revolving Firearms, of which the following is a specification.

This invention relates to the construction of firearms, and particularly to that type of revolving firearms in which the cylinder swings sidewise out of the frame of the arm; and the object of the invention is to provide means for locking the rear end of the cylinder in the frame and in coincidently locking the front end of the yoke in which the cylinder is mounted to the frame, to the end that the chambers of the cylinders may always be brought into alinement with the barrel when the parts are in firing position; and the invention consists in the provision of a locking-bolt for the front end of the yoke extending from the rear of the cylinder through the frame to the front end thereof and actuated by a slide on the frame, which slide also actuates locking means for the rear end of the cylinder.

In the drawings forming part of this application, Figure 1 is a side elevation of a part of a revolver, partly in section, embodying my invention. Fig. 2 is a front elevation of substantially the same parts, showing in dotted lines the cylinder swung out of the frame. Fig. 3 is a perspective view of the barrel and a part of the frame, showing also the yoke in a swung-out position. Fig. 4 is a sectional view through the frame and yoke on line 4 4, Fig. 2. Fig. 5 is a perspective view of a yoke-locking bolt. Fig. 6 is a side elevation, partly in section, showing a slightly-modified construction of the parts shown in Fig. 1.

In the drawings, let *a* indicate the frame of the firearm, and *b* the cylinder, which is hung on a pin *c*, fixed in a yoke *d* by one end, said yoke swiveling in the frame, the axis thereof being indicated by *e*.

Generally speaking, there are two methods in use for locking the rear end of the side-swinging cylinder in the frame of the firearm, one of which has a center-pin extending axially through the cylinder and entering a hole in the frame at the rear end of the cylinder. The other method consists in suppressing the center-pin and in locating a slide in the frame at the rear of the cylinder, with which a short bolt is connected, which slides into a hole in the rear end of the cylinder. The second of these types is illustrated in Fig. 1 and the first in Fig. 6. My invention is equally well adapted to both, and it is shown and described herein as applied to both.

While the preferred construction is to locate the locking-bolt for the front end of the yoke (in its passage around the cylinder) axially of the pivot-pin of the yoke, it may, if desired, pass around the cylinder at some other point.

As stated above, the axis of the yoke *d* consists of the pin *e*, preferably integral with the yoke and parallel with the pin *c*, on which the cylinder is supported. This axis or pin *e* passes through a hole bored through the frame in a line parallel with the barrel, the end of the pin entering the space between the sides of the frame just above the trigger. Through this pin *e* I bore a hole for the reception of the long arm of an L-shaped yoke-locking bolt *f*. (Shown in Fig. 5.) The short arm of this bolt is flat and stands substantially at right angles to the long arm thereof, as shown. The upper end of this short arm is turned at an angle to the latter, and the end of said outturned portion is provided with a short round nose *g*, projecting beyond the vertical edge of the short arm parallel with the long arm of the bolt and pointing in the direction of the end thereof. The latter is screw-threaded, and a round head *j* is screwed thereon. The pin *e* for a short distance back from the end thereof is counterbored, as at *h*, and in this counterbored chamber is located a coiled spring *i*, which, acting against the head *j* and the bottom of the counterbore, tends to force the bolt *f* to the rear.

Referring to Fig. 1, on the side of the frame and shown in dotted lines is a thumb-piece or slide *k*, to which a short bolt *m* is secured

through a slot in the side plate. This bolt enters a hole in the center of the rear end of the cylinder and is held in engagement therewith by means of a spring. (Not shown in the drawings.) Pivoted at *n* below the bolt *m* is a swinging lever *o*, the upper end of which engages and is moved by the thumb-piece *k* at a point inside of the side plate. The lower end of this lever *o* bears against one end of a sliding block *p*, whose opposite end bears against the head *j*, this block being limited in its movement by a pin fixed in the frame which passes through an elongated slot *q* in the block. It is clearly seen from this description that when the slide *k* is drawn back the block *p* will be forced forward, thus moving the locking-bolt *f* forwardly. Where this bolt extends upwardly from the axis of the cylinder-pin *c* it is let into a slot cut into the front edge of the yoke, as shown in Fig. 1, so that the front edge of the short arm of the bolt will normally be flush with the front edge of the yoke. As stated above, however, the upper end of this short arm of the bolt *f* is bent substantially at right angles to said arm, and reference to Fig. 2 will show that this upper portion of the short arm is carried far enough to one side to extend across the meeting line of the yoke with the frame. Said yoke and frame portion have a transverse slot milled therein, as shown in Figs. 3 and 4, to receive this bent-out end of the vertical arm of the locking-bolt, and in line with the nose *g* there is drilled in the frame a hole *r* (shown in said figures) for the reception of said nose and into which it is forced by the spring *i* when the parts of the arm are in firing position. The short arm of the yoke-locking bolt *f* may be varied more or less in height and in its other dimensions, if desired; but it best serves its purpose when the upper end thereof extends upwardly nearly to the axis of the cylinder. From this description it is seen that the entire body of the short arm lies within a slot in the yoke and that the upper end thereof extends across the meeting-line between the yoke and the frame, and the nose *g* on said bolt engages with a hole bored in the frame, thereby providing interlocking means between the upper end of the yoke and the frame possessing great strength. It is, moreover, of comparatively simple construction and is easily operated simultaneously with the operation of withdrawing the bolt *m* from the rear end of the cylinder, as shown in Fig. 1, or in the act of forcing the center-pin out of engagement with the frame, as shown in Fig. 6.

As these arms are usually constructed when the cylinder is swung into the frame the bolt *m* will be forced backward by the contact of the circular row of ratchet-teeth on the rear end of the cylinder with the end of the bolt *m* or by contact of the center-pin with the frame before the nose *g* on the end of the locking-bolt *f* can come in contact with the part of the frame under the barrel, the movement imparted to the bolt *m* or the center-pin operating to push forward the nose *g*, so that by the time the cylinder is in proper position the nose *g* will also be in position to move into the hole *r* in the frame designed to receive it. To provide, however, against the upsetting of the edge of the nose by striking against the frame part, the nose may be beveled, as shown in Figs. 4 and 5, if desired, whereby it may be forced endwise upon contact thereof with the frame.

Referring to Fig. 6, there is shown therein a type of firearm in which a center-pin *c* is moved rearwardly by a spring to enter a hole in the frame *a*, from which it is pushed outwardly by means of a slide *s*, having a short stud *t* thereon which engages with the end of the center-pin. This slide is operated by a thumb-piece *u*. (Shown in dotted lines in said Fig. 6 only.)

To provide means whereby my present invention may be applied to revolvers of this type, I construct the slide *s* with a downwardly and forwardly projecting arm *v*, the lower end of which takes the form of the block *p* and coöperates in like manner with the head *j* on the locking-bolt *f*, the latter being applied to the cylinder-yoke and engaging the frame of the arm in all respects the same as does said bolt when applied to the type of firearm shown in Fig. 1. No change of any moment is thus required to adapt this cylinder-yoke lock to the type of firearm shown in Fig. 6 except to lengthen the slide *s* in the manner described to engage the head *j* of said locking-bolt.

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

1. In a revolver having a side-swinging cylinder, a cylinder-yoke, and a locking device between the yoke and the frame in front of the cylinder; a locking device between the rear end of the cylinder and the frame, and a device located in the frame between the yoke-lock and the cylinder-lock, and operatively connected with each, whereby both of said locks may be simultaneously operated.

2. In a revolver having a side-swinging cylinder, a cylinder-yoke, and a locking device between the frame and said yoke in front of the cylinder; a locking device between the rear end of the cylinder and the frame; connecting members extending through the axis of the cylinder-yoke between said two locking devices, whereby they may be coincidently operated.

3. In a revolver having a side-swinging cylinder, a cylinder-yoke, and a locking device between said yoke and the frame contiguous thereto, consisting of an L-shaped locking-bolt, one arm of which is parallel with the yoke and the other arm of which extends

through the axis of the yoke; an offset member on the arm of said bolt in the yoke extending across the meeting line of the frame and yoke and adapted to engage the former; a locking device for the rear end of the cylinder, and connecting means between the yoke-lock and the cylinder-lock, whereby the operation of both may be simultaneously effected.

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