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FIREARM.

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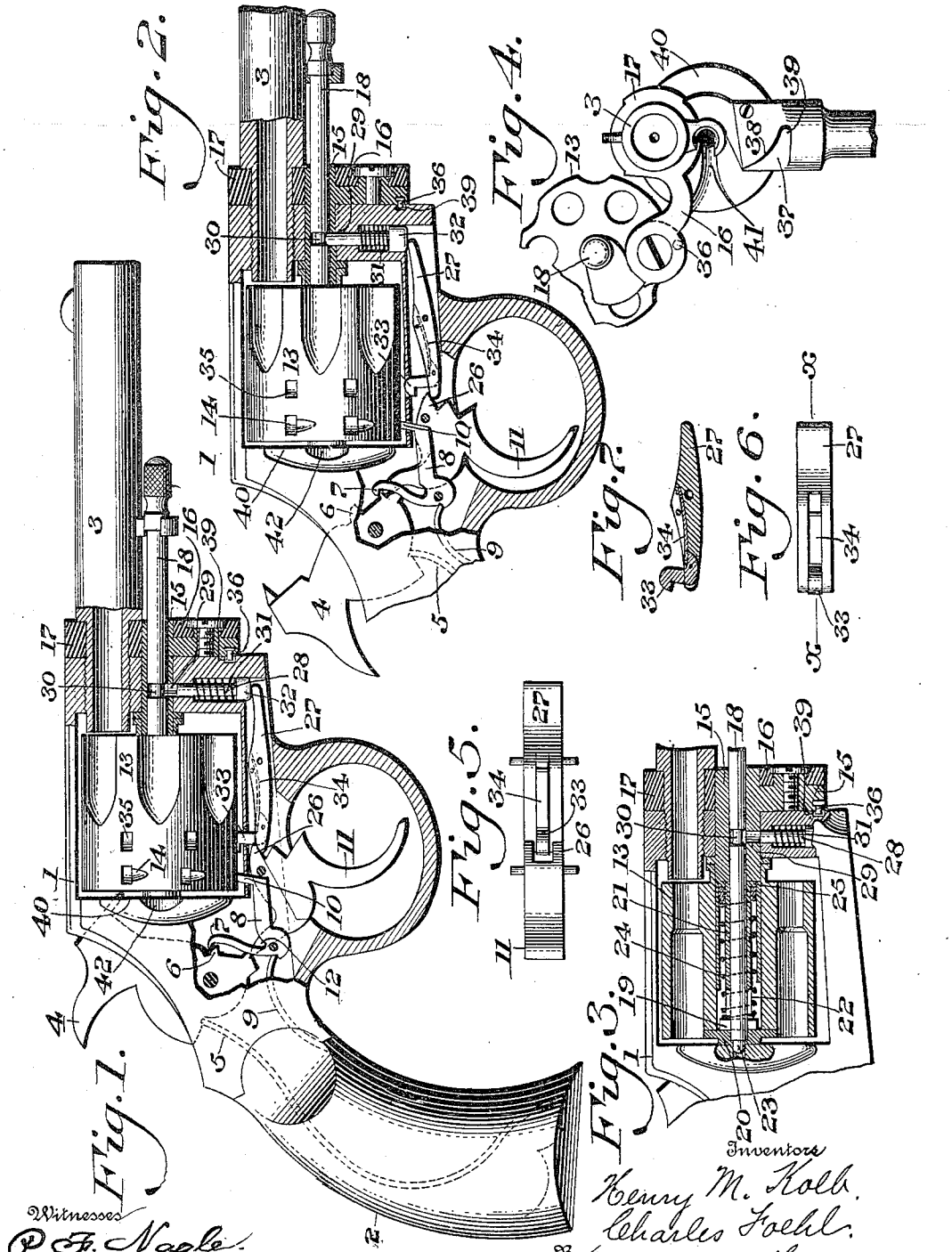

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FIREARM.

No. 847,011. Specification of Letters Patent. Patented March 12, 1907.

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To all whom it may concern:

Be it known that we, HENRY M. KOLB and CHARLES FOEHL, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Firearm, of which the following is a specification.

Our invention relates to a new and useful firearm, and consists in means for locking the cylinder in addition to the usual or ordinary lock therefor.

It further consists in means actuated by the trigger for locking the cylinder-rod in one position of the trigger and for locking the cylinder in the other position of the trigger.

It further consists of a guide and stop for the forward portion of the cylinder.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

Figure 1 represents a partial side elevation and partial sectional view of a firearm, shown as a revolver embodying our invention. Fig. 2 represents a partial elevation and partial sectional view of a portion of the revolver, showing the parts in different position from that seen in Fig. 1. Fig. 3 represents a sectional view of a portion of the device, showing the extractor-rod and connections. Fig. 4 represents a partial front elevation showing the cylinder as swung to one side. Fig. 5 represents a plan view of the trigger and lever actuated thereby in detached position. Fig. 6 represents a plan view of the lever. Fig. 7 represents a sectional view on line $x\,x$, Fig. 6.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates the frame of the revolver, 2 the handle or stock, and 3 the barrel, which is suitably connected with the frame 1.

4 designates the hammer, which is pivotally mounted in the frame and is suitably actuated by the spring 5.

6 designates a lug or projection on the hammer, with which is adapted to engage a lever-arm 7 on the dog 8, said dog being pivotally mounted in the frame and suitably actuated by the spring 9, said dog having a bolt 10 for purpose hereinafter explained.

11 designates the trigger, which has a suitable projection 12, engaging with a suitable portion of the hammer 4 in order that the latter may be actuated by the movement of the trigger.

13 designates the cylinder of the revolver, which is provided with a series of notches 14 and with which the bolt 10 is adapted to engage to hold the said cylinder in alinement with the barrel, it being understood that when the trigger 11 is raised from its position seen in Fig. 1 the lug thus acts upon the lever-arm 7, rotating the dog 8 upon its pivotal point and removing the bolt 10 from engagement with its notch, thus permitting the rotation of the cylinder. A suitable actuating device, such as a dog moved by the trigger, may be employed for rotating the cylinder.

The cylinder is mounted upon the sleeve 15, which is pivotally connected with the rotary arm 16, which has integral therewith or secured thereto a collar 17, which is adapted to rotate on the barrel, whereby it will be seen that said cylinder, sleeve, and rotary arm may be moved to one side for loading the cylinder and for ejecting the shells.

18 designates the extractor-rod, which passes through the sleeve 15 and has a pin 19 adjacent its inner end, which is adapted to abut against the ejector-plate 20, carried by the tube 21, which latter has slots 22 adjacent its inner end, by which said pin is adapted to move, said pin having its end 23 slightly reduced and passing through a suitable opening in the plate 20 is adapted to enter a recess in the frame 1 of the revolver for locking the cylinder and parts at the inner end. A spring 24 surrounds the tube 21 and bears against the pin 19, tending to hold the same in position normally as seen in Fig. 3, it being understood, however, that the rod 18 can be pulled to the right from the position seen in said Fig. 3 against the tension of the spring, so that the end 23 thereof is released from the recess in the frame 1, whereby the cylinder and the parts can move to one side, as before stated, the spring 24 serving to return the parts to their normal position when the rod 18 and ejector-plate 20 have been moved to the left, which can be done after the cylinder has been swung out, said action being for the purpose of ejecting the shells from the cylinder, the said rod when moving in this direction carrying with it the ejector-plate 20 and the tube 21, the lever 25 on the tube bearing against the spring 24, as will be evident.

26 designates a lug or projection on the trigger 11, said lug or projection engaging with one end of a lever 27, which is suitably pivoted in the frame of the revolver, and the opposite end of said lever bearing against the locking-pin 28, which is vertically movable in a suitable opening or passage in the frame 1 of the revolver. The sleeve 15 is provided with a suitable opening 29 in alinement with the passage in the frame 1, and said extractor-rod 18 is provided with a reduced neck or groove 30, so situated with respect to the opening 29 in the passage in the frame 1 that when the rod is in normal position, as seen in the figures, the said neck will be in alinement with the opening 29.

The spring 31 bears against a suitable portion of the frame and against a head 32, with which the pin 13 in the present instance is provided, so that the locking-pin 28 is normally held in the position seen in Figs. 1 and 3. Carried by the lever 27 is a dog 33, upon which bears a spring 34, serving to hold the same normally in the position seen in Fig. 7, but permitting a slight movement of said dog with respect to said lever, said dog 33 being so situated in the frame 10 as to be capable of entering and engaging with notches 35 in the face of the cylinder 13

36 designates a pin or bolt carried by the depending portion of the sleeve 15, and the front face of the frame 1 is provided with a groove 37, having the curved wall 38, said groove having a seat or stop 39, against which the pin is adapted to contact when the parts are in proper position, as best understood from Figs. 1, 2, and 3.

When it is desired to return the cylinder to its proper position, ready for firing, after it has been removed therefrom for discharging the shells or for reloading, at which time it is in position seen in Fig. 4, the collar 17 is rotated upon the barrel 3, carrying with it the rotary arm 16, and as this forms a support for the sleeve 15 the latter is moved therewith, bringing the pin 36 against the upper portion of the curved wall 38, which thus stops the cylinder and prevents it from striking the side of the frame of the firearm. As the cylinder is pushed inwardly, which can be done since the sleeve 15, supporting the same, is pivotally mounted on the arm 16, the pin 36 is caused to move in a path downwardly and inwardly, following the inclined wall 38 until it strikes the stop 39 in the front of the frame, it being understood that in this manner the pin 36 in striking the face 38 acts as a stop for preventing the cylinder striking the frame, as the arm 16 is thrown downward, and also serves as a guide for the cylinder at the forward portion of the firearm as it is moved to its proper position for firing, and finally abuts against the point 39 when the cylinder is in proper position.

The front face of the portion 40 of the frame 1 is provided with a groove 41, the outer extremity 42 of which is inclined, as best understood from Figs. 1 and 2, said groove 41 having curved side walls forming a guide to the opening in the wall of the frame 1, which is adapted to receive the end 23 of the extractor-rod 18.

When the parts are in the position seen in Fig. 1—that is to say, with the hammer down—the cylinder or extractor-rod 18, as well as the sleeve 15, upon which the cylinder is mounted and which is pivoted to the rotary arm 16, are not locked in their forward end, although the end 23 of the rod is in engagement with the frame 1. The cylinder 13 is held in proper position by the bolt 10 engaging in the recesses 13, and in addition is further positively locked by the dog 33 on the lever 27 engaging with the second set of notches 35, so that rotation of the cylinder is prevented and one of the chambers of the cylinder is held in proper alinement with the bore of the barrel 3. When the parts are in this position, by a slight pull upon the rod 18 to the right from the position seen in the figures of the drawing the end 23 is released from the frame 1, and the cylinder, with its coacting parts and the rod 18, can be moved to one side, sufficient movement of the said bolt 10 and the said dog 33 being permitted by the springs in order that this movement of the cylinder is permitted, it being understood that the collar 17 of the swinging arm 16 rotates on the barrel 3. The cylinder is then in position to receive the cartridges, and after the parts are thrown back to the position seen in Fig 1 the spring 24 immediately returns the rod 18 to the position seen in Fig. 3, with the end 23 engaged in the frame 1. The revolver is now ready for firing. As the trigger 11 is pulled back the projection 12 raises the hammer 4 by reason of its engagement therewith, and at the same time the lug 6 acts upon the dog 8 in order to remove the bolt 10 from the notch 14, with which it is in engagement, and the lug 26 of the trigger 11, which is in engagement with the lever 27, lowers the end of the latter, which carries the dog 33, so that the same is removed from engagement with the notches 35, and at the same time the cylinder 13 is properly rotated to bring a chamber in alinement with the bore of the barrel 3, and at the same time as the lug 6 passes the lever-arm 7 on the dog 8 the spring 9 acts upon the same in order to force the bolt 10 into engagement with the next notch 14, which is properly spaced therefor, so that the cylinder is again locked when the chamber of the cylinder is in alinement, as before stated. By continued rearward movement of the trigger 11 the hammer 4 is released and is forced forward by the spring 5 striking the cartridge, and fires the same, it being understood that the lever-arm 7 is formed of thin material and is resilient, so

that the return movement of the hammer causes the lug 6 to press the lever-arm slightly to one side to permit proper movement of the parts. As the trigger 11 lowers the dog end of the lever 27 the forward end of the latter is raised, which thus elevates the locking-pin 28 and overcomes the tension of the spring 31. The pin 28 will thus be passed through the opening 29 in the sleeve 15, which is the cylinder-support, and enters the groove 30 in the extractor-rod 18, it being seen that by this provision the forward end of the cylinder-support and the cylinder are positively locked in position, as well as the extractor-rod 18, so that the same can be moved in either direction. As the hammer is released or tripped at a suitable point in the rearward movement of the trigger, while the latter is still held in its rearward position until after firing, the pin 28 will be held in its elevated position, whereby the cylinder and its support, as well as the extractor-rod, is positively locked during the act of firing and absolutely insures proper operation of the parts, it being noticed that by reason of the locking of the rod 18 the rear end 23 thereof cannot be removed from the recess in the frame 1 with evident results. As soon as the trigger is released in addition to the usual return the spring 31, acting through the lever 27 and pin 28, serves as additional trigger-returns, at the same time removing the pin 28 from engagement with the cylinder-support, the sleeve 15 and the rod 18 causes the dog 33 to again engage with one of the notches 35. By reason of the groove 41 in the face 40 of the frame 1 the end 23 of the extractor-rod 18 is properly directed to the opening in the face of the frame, said rod 18 being forced slightly forward as the end 23 contacts with the inclined opening 42 of the groove and the end thereof will be directed by the groove into proper position to be forced into the opening in the frame by the action of the spring 24. In addition to this guide we have provided the groove 37 in the front face of the frame 1, said guide being adapted to receive the pin 36 on the sleeve 15 and direct the same to the stop 39, which is so located and arranged with respect to the opening for the reception of the end 23 that the cylinder is in exactly the proper position when the pin 36 contacts with the stop 39. By this provision it will be seen that both the front and rear portions of the cylinder and the supporting parts will be positively guided to a proper position for firing and stopped at this point.

It will be evident that various changes may be made by those skilled in the art which will come within the scope of our invention, and we do not, therefore, desire to be limited to the exact construction herein shown and described.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a firearm, a cylinder rotatably mounted on a suitable support, and means suitably actuated in one position to lock said support and in the other position to release said support and lock said cylinder.

2. In a firearm, a cylinder rotatably mounted on a suitable support, and means, actuated by the movement of the trigger, serving in one position to lock said support and in the other position serving to lock said cylinder.

3. In a firearm, a cylinder rotatably mounted on a suitable support, an extractor pin or rod and means in one position serving to lock said pin and in the other position serving to lock the cylinder.

4. In a firearm, a cylinder rotatably mounted on a suitable support, a spring-actuated bolt for locking said cylinder in one position and the cylinder-support in the other and adapted to be actuated by the trigger, and a dog adapted to lock said cylinder and actuated by the movement of the hammer.

5. In a firearm, a cylinder rotatably mounted on a suitable support, a lock therefor, an extractor-rod suitably mounted with respect to said cylinder, a pin actuated by the movement of the trigger and adapted to lock said rod and a dog actuated by said trigger for locking said cylinder.

6. In a firearm, a cylinder rotatably mounted on a suitable support, a lock for said cylinder actuated by the hammer, a lever pivotally supported adjacent said cylinder, a pin actuated by said lever for locking said support and a dog carried by said lever and adapted to lock said cylinder.

7. In a firearm, a cylinder rotatably supported, means for swinging said cylinder to one side for loading and discharging the shells, a guide in the front face of the rear portion of the frame for directing the cylinder to its proper position and a second guide in front of said cylinder adapted to direct the same to its proper position.

8. In a firearm, a cylinder rotatably supported, means for swinging said cylinder to one side of the frame, an extractor-rod suitably mounted with respect to said cylinder and having an end projecting beyond the same, a guide adapted to engage said projecting end for directing the same to a suitable opening in the frame of the firearm and a second guide forward of the cylinder adapted to guide the same to its proper position.

9. In a firearm, a frame having a suitable opening therein, a rotatable cylinder, a support therefor adapted to be swung to one side of said frame and carry said cylinder, an extractor-rod suitably mounted with respect to said cylinder and having a projecting end, a guide adapted to engage said end and direct

the same to said opening, a second guide in the frame of the firearm forward of the cylinder and a pin carried by said support and entering said guide for directing the cylinder to its proper position.

10. In a firearm, a cylinder rotatably mounted in a suitable support, spring-actuated means for locking said cylinder in one position and the cylinder-support in the other, and a dog adapted to lock said cylinder and actuated by the movement of the trigger to unlock the same.

11. In a firearm, a cylinder, means for bringing the same to one side for loading or for discharging shells and a stop for preventing the cylinder from striking the frame of the firearm when said cylinder is being returned to its normal position.

12. In a firearm, a cylinder rotatably mounted upon a suitable support, an arm on which said support is pivotally mounted, said arm being rotatably supported, and a stop carried by said cylinder-support adapted to prevent the cylinder from striking the frame of the firearm when said cylinder is returned to its normal position.

13. In a device of the character described, a cylinder rotatably mounted upon a suitable support, an arm to which said support is rotatably connected, said arm being rotatably mounted upon the frame of the firearm and a pin carried by said support adapted to contact with a suitable portion of the frame of the firearm to prevent the cylinder from contacting therewith.

14. A firearm, a cylinder, a rotatably-mounted support upon which said cylinder is suitably mounted, a pin carried by said support and a guide in the frame of the firearm against which said pin is adapted to contact, and to be guided to its proper place as the cylinder is returned to the firing position.

15. In a firearm, a rotatably-mounted arm, a cylinder-support pivotally mounted on said arm, a cylinder on said support, a pin carried by said support, an inclined guide in the frame of the firearm against which said pin is adapted to contact as the cylinder is returned to firing position to prevent the cylinder striking the frame and said pin following said guide to properly direct the cylinder to the firing position.

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