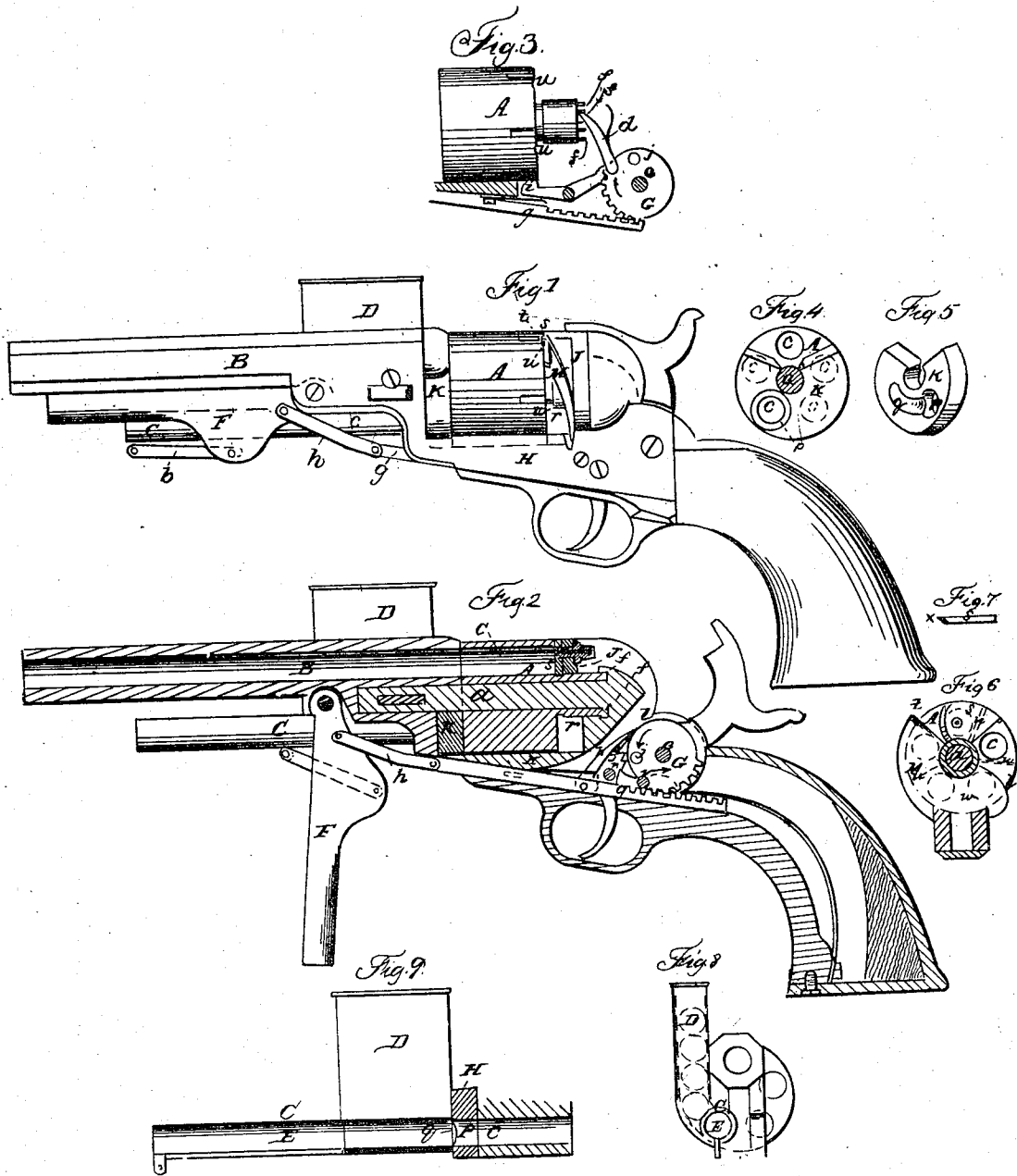


R. WHITE.

Revolver.

No. 12,649.

Patented Apr. 3, 1855.



# UNITED STATES PATENT OFFICE.

ROLLIN WHITE, OF HARTFORD, CONNECTICUT.

## IMPROVED REPEATING FIRE-ARM.

Specification forming part of Letters Patent No. **12,649**, dated April 3, 1855.

*To all whom it may concern:*

Be it known that I, ROLLIN WHITE, of the city and county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Repeating Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of a pistol constructed according to my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a side view of the mechanisms by which the rotation of the breech and the locking and unlocking of it are effected. Fig. 4 is a front view of the rotating chambered cylinder and the guard-plate which is placed in front thereof. Fig. 5 is a perspective view of the guard-plate, showing its back side. Fig. 6 is a back view of the rotating chambered cylinder, showing the breech and the spring-guard for the protection of the charges from explosion by lateral fire from one to the other. Fig. 7 is a top view of the breech. Fig. 8 is a front view of the magazine and charger. Fig. 9 is a longitudinal section of the charger.

Similar letters of reference indicate corresponding parts in the several figures.

This invention, which, to distinguish it from others of my inventions of improvements in fire-arms, I will denominate "No. 5," relates to fire-arms having the rotating chambered cylinder or breech.

The first part of the invention consists in a certain method of applying and arranging a magazine and charger in connection with the rotating chambered cylinder for the purpose of charging the chambers as they, by the rotation of the cylinder, are severally brought to a suitable position.

The second part of my invention consists in combining the rotating chambered cylinder with the charger in such manner that by the operation of drawing back the charger after charging a chamber of the cylinder, the cylinder shall be rotated to the extent required.

The third part of my invention consists in combining the hammer with the charger in such a way that by the operation of moving

the charger to drive a charge into the chamber the hammer is raised to cock the lock.

The fourth part of my invention consists in a spring-protector for the purpose of protecting the charges in the contiguous chambers from the effects of the lateral fire from that chamber, which is discharged in the regular manner.

A is the chambered cylinder, B is the barrel, and *a* the pin upon which the cylinder rotates. D is the magazine, which consists of a box of such length and width as to contain cartridges placed one upon another. It is attached to one side of the barrel, close in front of the cylinder, in such a position that the cartridges within it stand parallel with the barrel. It opens at the bottom into the charging-tube C, (see particularly Figs. 8 and 9,) which stands parallel to the barrel in such a position that one chamber of the cylinder is opposite to it when another is opposite the barrel. It is of such a diameter as to allow the cartridges to slide easily within it, and it extends some distance to the front of the magazine. It contains a charging-piston, E, which is attached by a link, *b*, to a lever, F, pivoted under the barrel. This lever, when thrown up close to the barrel, as shown in Fig. 2, draws the piston forward, as shown in Fig. 9, far enough for a cartridge to drop into the tube; and when the lever is pulled down, as shown in Fig. 2, it drives the piston forward far enough to drive the cartridge from the tube into the opposite chamber, *c*, of the cylinder.

The cartridges may be allowed to drop into the tube by gravitation or forced into it either downward or sidewise by a spring applied to the cover of the magazine.

The magazine and charging-tube may be arranged in front or in rear of the chamber. A similar magazine may be used for percussion-caps or other priming.

The cylinder receives rotary motion by means of a spring-tooth, *d*, attached by a pin, *e*, to a toothed wheel or sector, G, which turns freely upon the arbor *e* of the hammer I, but which is perfectly independent of the hammer, the said tooth *d* being caused to act on teeth *f f* at the rear of the cylinder, as shown in Fig. 3, in substantially the same way as the

tooth attached in other fire-arms to the tumbler, for the purpose of rotating the breech by the cocking of the hammer. The wheel or sector G is moved, for the purpose of operating the tooth *d*, by means of a toothed-rack, on a rod, *g*, which slides through the lock-plate H, and is connected, as shown in Fig. 2, by a link, *h*, with the lever F. When the lever F is thrown down to drive back the charging-piston to drive a cartridge into a chamber of the cylinder, the wheel or sector G moves in the direction of the arrow shown in Fig. 2, and the spring-tooth *d* slides downward over a tooth, *f*, without moving the cylinder; but when the lever is thrown up again to draw back the piston the sector moves in the direction of the arrow shown in Fig. 3, and the tooth *d* engages with a tooth, *f*, and rotates the cylinder the proper distance to bring opposite the barrel a chamber which has been previously charged. The cylinder is locked in proper position during the discharge by a catch-lever, *i*, (see Fig. 3,) which engages in one of a series of notches. This catch-lever is operated upon to unlock the cylinder previously to its rotation by means of a pin, *j*, attached to the wheel or sector G. This resembles the mode of locking and unlocking the cylinder in some other fire-arms, except that the pin *j* in those fire-arms is attached to the tumbler or hammer.

The cocking of the lock is effected during the operation of charging the chambers by means of a tooth, *k*, (see Fig. 2,) which is attached to the rack-rod *g*, and which, as the rack-rod is moved back by the lever F, engages with a tooth, *l*, on the tumbler or hammer, or in a notch in the same, and thus raises or throws it back till the trigger *m* falls into the sear *n*. When the lever F is thrown up to draw forward the charging-piston and rotate the breech, the tooth *k* is drawn out of the way of the tumbler, resting as it moves upon a fixed pin, *o*, inserted transversely in the lock-plate.

The front ends of the chambers, except that one which happens to be in line with the barrel and that which is at the same time in line with the charging-tube, are closed by a guard-plate, K, which fits close up to the front of the cylinder. The form of this plate is shown in Figs. 4 and 5, where *p* is a hole made for the cartridge to pass through in its way from the magazine to the barrel. On the back of this guard-plate there is an inclined groove, *q*, (see Fig. 5,) leading from one side of the hole *p* in a circular direction. The cartridge, after being inserted into the cylinder by the charger, is caused by the rotation of the cylinder to follow this groove; and if any portion of it remains protruding through the front of the cylinder it is driven in by the inclination at the bottom of the groove. The main object of the guard-plate K is the prevention of the discharge of the balls by any accidental ex-

plosion of the charges in the chambers not in line with the barrel; and, in connection with this guard, I carry the chambers right through the cylinder, and provide for the escape of the exploded powder by leaving an open space, *r*, (see Figs. 1 and 2,) all round the rear of the cylinder, except opposite the barrel, where a fixed breech, *s*, is secured to the recoil-shield J. This breech is made with a sharp edge, *x*, (see Fig. 7,) on the side toward which the cylinder rotates, in order that it may be caused by the rotation of the cylinder to shear off the butt-end of the cartridge.

M, Figs. 1 and 6, is the spring-protector for the purpose of protecting the rear ends of the chambers from the effects of lateral fire. This consists of a light steel springing plate secured to the lock-plate or recoil-shield, and made broad enough to cover nearly the whole of the exposed part of the rear of the cylinder. One end, *t*, of this plate presses against the back of the cylinder and occupies such a position that when the cylinder is locked with one of its chambers in line with the barrel it enters one of a series of notches, *u u*, made in the back of the cylinder between the chambers. One side of these notches is inclined to throw out the spring again when the next movement of the cylinder takes place. It is only necessary that the protector should be applied to act on one side of the operative chamber, as the chamber between the operative chamber and the charging-tube contains no charge, and the fire in that direction has too far to go to reach a charged chamber to be productive of any danger.

Having thus fully described my invention, I will proceed to point out what I claim and desire to secure by Letters Patent.

1. I do not claim the employment of a magazine to supply cartridges to the chambers, or caps to the nipples, when the cartridges are arranged therein, end to end, to be fed into the chamber or chambers or onto the nipples of the piece; but I claim the method, substantially as herein described, of combining and applying the magazine and charging-tube either for cartridges or priming—to wit, the charging-tube being arranged in line with the chamber, or one of the chambers, or the nipple, or one of the nipples, of the piece, and the magazine being arranged in such a manner relatively thereto that the cartridges or caps lie side by side, to be fed sidewise, one by one, as required, into the charging-tube, by gravitation, a spring, or other means, on the retraction of the said piston from opposite the magazine, and to be fed into the chamber or onto the nipple by the movement of the piston toward it.

2. I claim combining the rotating chambered cylinder with the charging-piston or its equivalent, in the manner substantially as set forth, so that by the operation of retracting the charger after charging a chamber of the cyl-

inder the cylinder shall be rotated to the extent required to bring a new chamber in line with the barrel.

3. I claim combining the hammer with the charging-piston, in the manner substantially as herein described, so that in the operation of moving the charging-piston to drive a cartridge from the magazine into the chamber the hammer shall be raised to cock the lock.

4. I claim the spring-protecting plate M, ap-

plied, substantially as described, to fall into notches *u u* in the rear of the rotating cylinder, to protect the other charged chambers from the effects of lateral fire from the discharge of the chamber which is in line with the barrel.

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Witnesses:

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