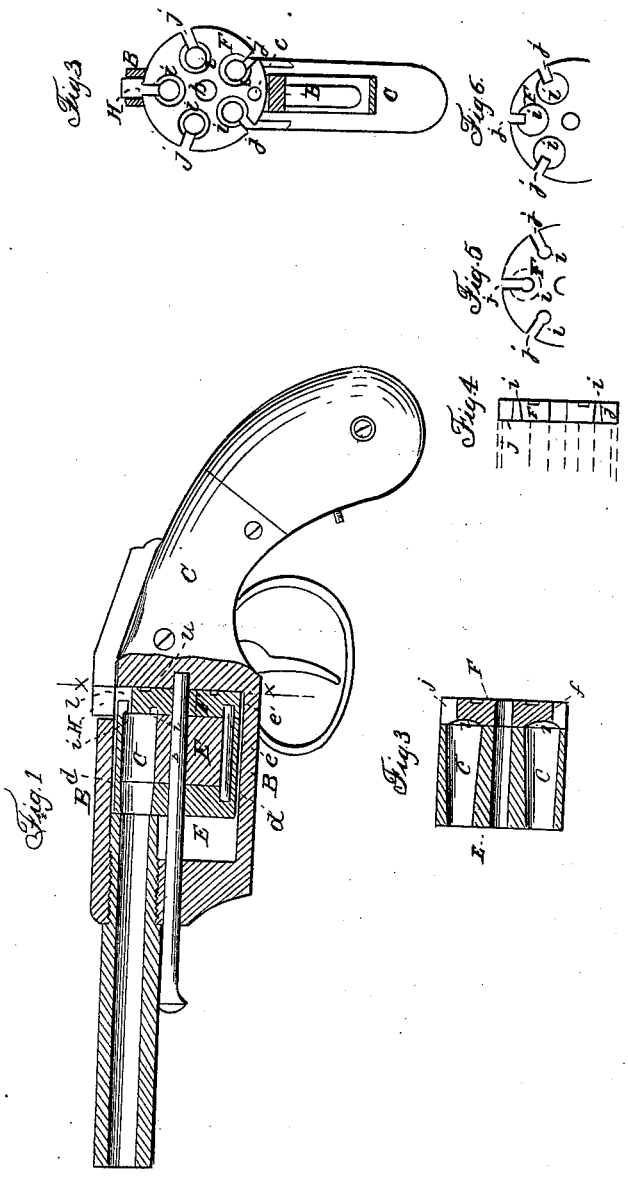
R. WHITE.

Revolver.

No. 19,961. Patented Apr. 13, 1858.



UNITED STATES PATENT OFFICE.

R. WHITE, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN REVOLVING FIRE-ARMS.

Specification forming part of Letters Patent No. **19,961**, dated April 13, 1858.

To all whom it may concern:

Be it known that I, ROLLIN WHITE, of the city of Hartford, in the 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 longitudinal view of a pistol with my improvements, exhibiting the barrel and cylinder partly in section. Fig. 2 is a transverse section of the same in the line *x x* of Fig. 1. Fig. 3 is a central section of the cylinder, partly in section, and showing a modification of the invention. Fig. 4 is a section of the rotating breech detached from the cylinder. Figs. 5 and 6 are face views of the rotating breech.

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

These improvements relate to that class of fire-arms known as "revolvers," in which the many-chambered cylinder is arranged to rotate on an axis that is parallel, or nearly so, with the stationary barrel.

The first improvement consists in enlarging the chambers, or a portion thereof, toward the rear, when the whole or a portion of the chambered cylinder is made in a separate piece from the breech, for the purpose of allowing the cylinder, or the portion thereof that is detached from the breech, to be driven forward in contact with the stationary barrel to make a tight joint therewith by the force of the explosions of the charges.

A second improvement consists in making the detached breech of a rotating chambered cylinder rotate with the cylinder, thereby obviating any stoppage to the rotation of the cylinder by the protrusion of the cartridge through the rear of the chambers; and a third improvement consists in a certain construction of the rotating breech for the purpose of allowing the hammer to strike into the chambers and explode a priming in the rear end of the cartridge without using a needle or a detached priming—such as a cap, pill, or ribbon.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

A is the stationary barrel, connected with the stock C by the usual frame, B, a portion, *a*, of which constitutes the recoil-shield. *b* is the fixed arbor upon which the chambered cylinder E and the breech F rotate. The rotating chambered cylinder E and the rotating breech are fitted together with face-joints round the chambers *c c*, and the front end of the cylinder and the barrel may be fitted together with similar or any other kind of joints. The cylinder is shown in Fig. 1 as being divided transversely into two parts at the line *d d*, as well as being made separate from the breech F. The division at *d d* will, however, never be necessary when the breech is made in a separate piece, and the chambers are extended right through the cylinder; but the drawing Fig. 1 is made to illustrate two methods of carrying out the first part of my invention—to wit, the construction of the whole of the chambered cylinder, and the construction of a portion only thereof to be driven forward against the barrel by the force of the explosion.

The proper construction for the chambered cylinder, when the breech is made in a separate piece, is exhibited in Fig. 3, where it is shown that the chambers *c c* are enlarged toward the rear, while in Fig. 1 only the front portion of the chamber is enlarged toward its rear. The same effect is produced by either construction, for it is obvious that the force of the explosion will exert itself in a forward direction upon the sides of the chambers in such a way as to drive either the whole cylinder, or any such portion thereof as may be detached from the breech and contains an enlargement of the chambers, in a rearward direction. The forward movement of the whole or a portion of the cylinder in the manner above described will cause a looseness at the junction of the chambered cylinder with the breech, or at the joint *d d;* but I intend to obviate windage at this joint by the use of cartridges with metal cases of suitable construction.

The rotary breech F is or may be made substantially the same form as when it constitutes an immovable portion of the chambered cylinder, and may derive its rotary motion from the hammer or trigger in a similar manner. The chambered cylinder E is caused to rotate with the breech by a pin, *e*, that is secured to the former, and enters a hole, *e'*, in

the face of the latter, as shown in Fig. 1, or vice versa, which permits of as much forward movement of the cylinder as may be requisite. When the cylinder is divided, as at *d d*, a similar pin is employed to cause the rotation of the forward portion with the portion attached to the breech.

To enable the cartridges to be exploded by striking them directly with the hammer a recess, *i*, is formed in the face of the rotating breech F at the back of each chamber, either in the concave form exhibited in Figs. 3 and 6, which is intended to receive the concave-formed rear end of a cartridge, or in the annular form exhibited in Fig. 1, to receive an annular projection at the rear of the cartridge, or in the form of a small central cavity, as shown in Figs. 4 and 5, to receive a nipple-like projection on the rear of the cartridge. A series of notches, *j' j'*, are cut in the periphery of the breech deep enough to meet the recesses *i i*, one for each, to enable the hammer H, swinging in the manner most common in fire-arms, to strike into the recesses *i i*, and thus to cut into or through those parts of the cartridges which project therewith, which parts contain some percussive priming, and hence the explosion is effected. The hammer H should be made to fit into the notches *j' j'*, and up to the rear of the chambered cylinders, when it is down, in such a manner as to close those portions of the chambers which the breech by reason of its notches *j j* fails to close. The notches *j j* serve to admit a pin to push the shell or any portion of an exploded cartridge forward out of the chambers.

I do not here intend to claim extending the chambers right through the rear of the rotating cylinder, as that forms part of the subject-matter of Letters Patent of the United States obtained by me dated 3d April, 1855; but

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

1. The enlargement of the chambers in the rotating cylinder, or in a portion thereof, in a rearward direction, when such cylinder or portion thereof is detached from the breech, and thereby rendered capable by such enlargement of being driven forward, substantially as described, into contact with the stationary barrel for the purpose of preventing windage.

2. Making the detached breech of the rotating chambered cylinder rotate with the said cylinder, substantially as and for the purpose set forth.

3. Constructing the breech of the revolving cylinder with a recess, *i*, in its face at the back of each chamber, and a notch, *j*, in its periphery meeting the said recess, substantially as described, so that the hammer H, swinging in the manner most common to fire-arms, may strike into the chambers and cut or tear and and thereby explode the cartridge.

4. The fitting of the hammer to close that portion of the breech which is left open by the notches *j j*.

ROLLIN WHITE.

Witnesses:
A. W. BAILEY,
D. P. WHITE.