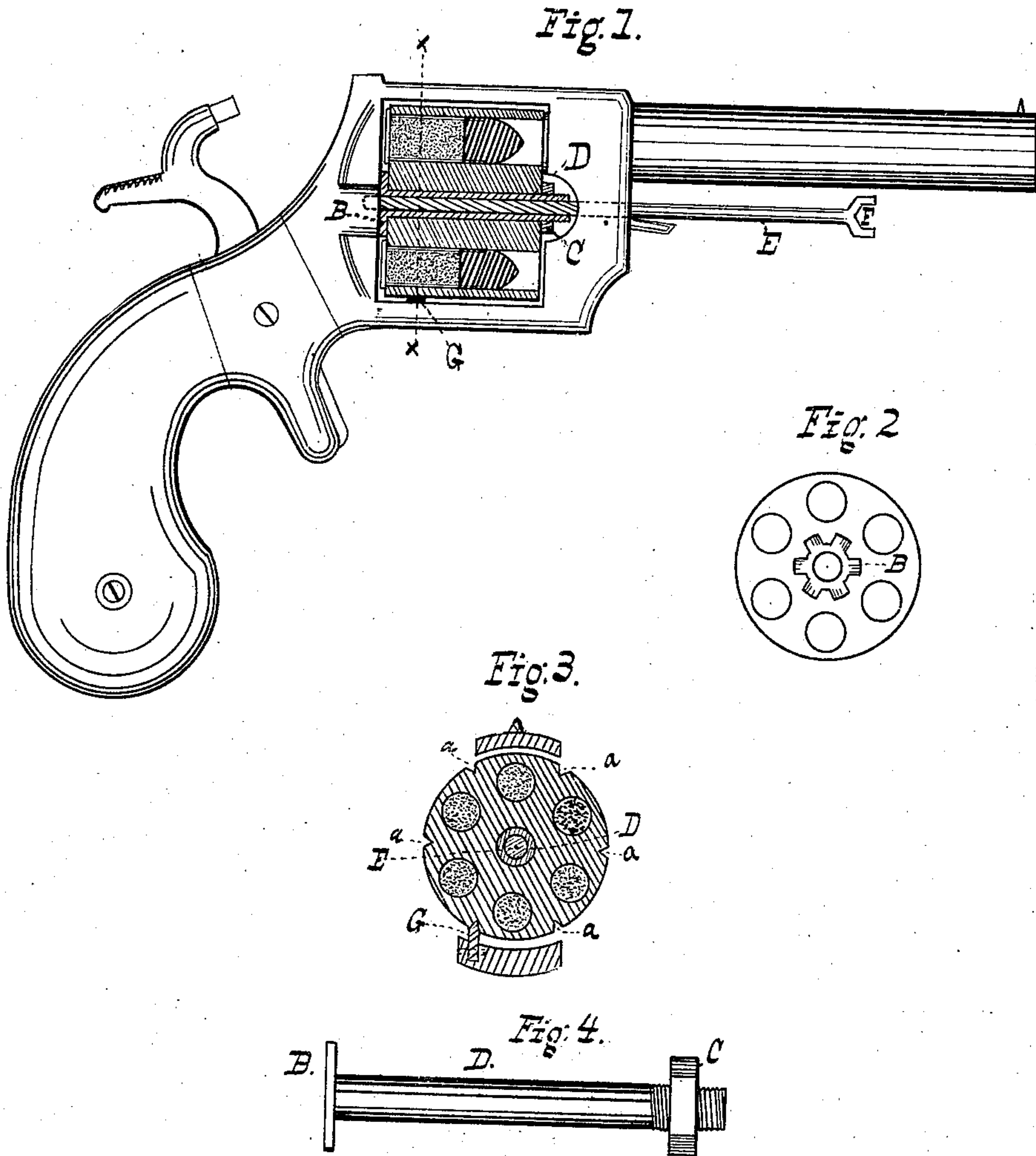


R. D. WILLIAMS.
Revolving Fire-Arm.

No. 197,708.

Patented Nov. 27, 1877.



Witnesses
Wm. A. Bertram.
W. L. H. Barclay.

Inventor.
Rich. Douglas Williams.

UNITED STATES PATENT OFFICE.

RICHARD D. WILLIAMS, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN REVOLVING FIRE-ARMS.

Specification forming part of Letters Patent No. **197,708**, dated November 27, 1877; application filed December 23, 1876.

To all whom it may concern:

Be it known that I, RICHARD DOUGLAS WILLIAMS, of the city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Revolving Fire-Arms; and I hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of a revolver, the cylinder and its connections being shown in section. Fig. 2 represents a rear view of the cylinder; Fig. 3, a sectional view of the weapon, on line *xx* of Fig. 1; and Fig. 4, an enlarged view of the ratchet, central tube, and fastening device, as hereinafter described.

This invention relates, as stated, to revolving fire-arms; and it consists in certain details of construction, as hereinafter described and claimed.

The parts of a revolving fire-arm upon which the greatest amount of wear falls are the ratchet and pawl for revolving the cylinder, and the consequence is that the wearing away of these parts soon becomes a source of annoyance and danger to the person using the weapon. A very small amount of wear on these parts is sufficient to almost destroy their efficiency, as the cylinder then fails to revolve far enough when the weapon is cocked to bring the uppermost chamber of the cylinder into line with the barrel. The latching device, of course, fails to enter the notch in the cylinder, and the latter is left free to be rotated backward by an accidental jolt. That under these circumstances the weapon becomes dangerous to the user is as evident as that its efficiency is greatly impaired, the bullet being obliged to turn a corner, as it were, in order to enter the barrel.

In order to remedy the evil, when the ratchet, as is usual, is integral with the cylinder, it is necessary to take the weapon apart, remove the pawl, and hammer it out to a length sufficient to compensate for its own wear and that of the ratchet.

I place the latch or detent for holding the cylinder in position a little to one side of the center line of the weapon. The end of the latch is made tapering, as shown, and the notches on the cylinder are of a corresponding shape. As the result of this construction, the

latch operates to assist in revolving the cylinder from the moment it commences to enter the notch, both the form and location of the latch conducing to this result.

In revolvers having an even number of chambers, it is evident that when one chamber is in line with the barrel another is exactly opposite and just over the latch, when the latter is centrally situated in the bottom piece of the weapon. Under these circumstances the notches for the latch must be cut opposite the chambers, whereby they are greatly weakened. When the latch is at one side, the notches come between the chambers, and the cylinder may with safety be made much lighter.

It is not new, broadly, to place the notches between the chambers, nor to place the latch to one side of the vertical center of the weapon; but heretofore the notches and latches, when so situated, have been made square, thus defeating the object I have had in view in making them V-shaped, the advantages I secure consisting in facilitating the revolution of the cylinder, and in causing the chamber to register perfectly with the barrel.

In construction my revolver differs from an ordinary weapon of the same class only in certain features of the cylinder and its immediate connections.

The cylinder is made perfectly plane on both ends, and when a central pin, E, is to be used the hole for it is bored somewhat larger than usual.

The ratchet B is either struck up from a suitable piece of steel, and screwed upon the end of the tube D or upon the cylinder, or is made integral with the tube by splitting the tube for a short distance into as many parts as the cylinder has chambers, and turning the split portions over at right angles to the axis of the tube. The portions so turned over are then beveled on one side to make a smooth ratchet. The other end of the tube is then threaded for the nut C, to which any convenient form of nut-lock may be attached.

The end of the center-pin E may be furnished with a spanner, F, to fit the nut C. When no center-pin is used, a solid rod is substituted for the tube C, and its ends constitute the bearings for the cylinder.

As the pawl and ratchet wear away, and it

is noticed that the cylinder fails to revolve far enough to bring its chambers in line with the barrel, it is only necessary to loosen the nut C, bring a chamber into line with the barrel, full - cock the weapon, and tighten the nut while the revolver is cocked. It is clear that under these circumstances the ratchet will be secured in its proper position.

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

1. In a revolving fire-arm, a cylinder having its ratchet capable of rotation independently of the cylinder, and provided with means for securing it in any position in the line of its rotation, substantially as described.

2. In a revolving fire-arm, a cylinder having an even number of chambers, and having be-

tween the chambers a series of V-shaped notches for holding the cylinder in position when the weapon is full - cocked, in combination with a latching device situated on one side of the vertical center of the weapon, substantially as described.

3. In a revolving fire-arm, a cylinder having its ratchet and center-pin or tube made integral, and adapted to be secured to the cylinder by means of a nut, substantially as set forth.

4. The combination, with the cylinder, of the ratchet B, tube or rod D, and nut C, substantially as described.

RICHD. DOUGLAS WILLIAMS.

Witnesses:

W. A. BERTRAM,

EDW. RAINE.