S. W. WOOD.

REVOLVING FIRE-ARMS.

No. 186,445. Patented Jan. 23, 1877.

Fig. 1.

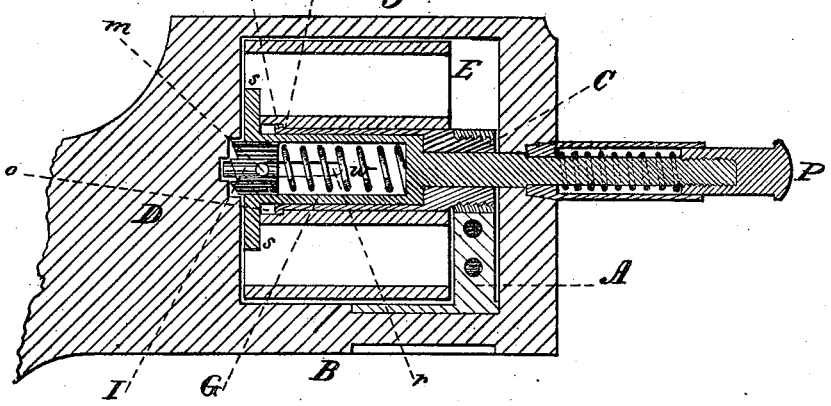


Fig. 2.

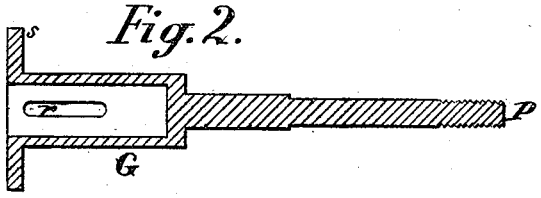


Fig. 4.

Fig. 3.

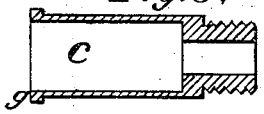
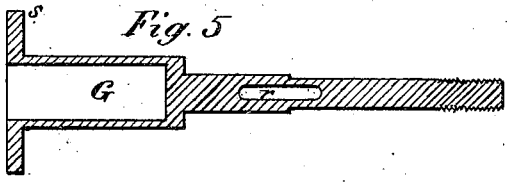


Fig. 5



Witnesses

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UNITED STATES PATENT OFFICE.

STEPHEN W. WOOD, OF CORNWALL, NEW YORK.

IMPROVEMENT IN REVOLVING FIRE-ARMS.

Specification forming part of Letters Patent No. **186,445**, dated January 23, 1877; application filed August 25, 1876.

To all whom it may concern:

Be it known that I, STEPHEN W. WOOD, of Cornwall, county of Orange, and State of New York, have invented a new and useful Improvement in an Extracting Device for Removing the Empty Shells from Revolving Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 represents a central longitudinal section of the cylinder of a revolving pistol, together with so much of the frame thereof as seems necessary to illustrate my invention; Fig. 2, detached view of the tubular cylindrical extractor in section; Fig. 3, a detached view, also in section, of the stud for supporting and connecting the cylinder to the frame of the arm, and upon which it revolves; Fig. 4, detached view of the ratchet by which the cylinder is revolved; Fig. 5, a central longitudinal section of a modification, in detail, of the extractor, also detached.

My invention consists, in revolving fire-arms, in constructing the body of the ejecting device tubular, so as to operate over or around the ratchet, rigidly secured to the revolving cylinder, and so that the stud for supporting the revolving cylinder may be firmly secured to the frame of the arm and remain stationary therewith, and the tubular ejecting device operating therein and surrounding the ratchet, permitted to revolve with the cylinder, substantially as herein described; also, in revolving fire-arms, a tubular ejecting device for ejecting the empty shells from the chambers of the cylinder, adapted to operate on the exterior of a fixed ratchet, rigidly secured to the cylinder, and by which the cylinder is revolved, substantially in the manner herein set forth.

My invention pertaining strictly to the ejecting device for removing the empty shells from the chambers in revolving fire-arms, only so much of the frame of an arm is represented in the accompanying drawing as is deemed necessary to illustrate its operation.

A represents an L-shaped sleeve, which is fitted to the lower strap B of the frame D. The barrel, lock, and handle of the arm (not being shown) may be constructed after any of the well-known plans in common use. To this sleeve A is firmly secured the fixed or permanent cylindrical and tubular base pin or stud C, for supporting the cylinder E, and upon which stud it revolves freely.

To retain the cylinder in position upon this fixed stud or base pin, a collar, *g*, is formed on its near end, which bears against a corresponding shoulder, *h*, therein, so that when the cylinder is mounted upon this stud, and the stud secured to the L-shaped sleeve A, the cylinder will be held firmly in line parallel with the bore of the barrel, and permitted to revolve thereon.

The cylinder being thus mounted upon the stud C, and the stud secured to the L-shaped sleeve A, as represented in Fig. 1, the cylindrical and tubular ejecting device G is placed in said stud C with its shank or stem projecting through and beyond the frame of the arm, by which the requisite longitudinal motion is obtained to eject the empty shells.

After inserting the ejecting device within the hollow stud, the ratchet I is then placed within the end of the tubular ejector, and rigidly secured to the cylinder by a pin, *m*, passing through it. Thus the several interior parts, consisting of the hollow stud C, tubular ejecting device G, and ratchet I, are placed within the cylinder, and one placed within another, so that the stud C remaining stationary, and the cylinder revolving thereon, the ejecting device within the stud revolves with the cylinder, and the ratchet placed within this ejecting device and secured to the cylinder rigidly, revolves therewith in unison with the ejector G, by means of the pin *m*, though not in anywise connected or attached to this ratchet.

In order to secure the ratchet I to the cylinder by the pin *m*, so that the cylinder may be revolved thereby, and at the same time permit the stud C to remain stationary, an annular space, O, is provided between the inner surface of the ejector-plate and the edge of the stud C, so that the pin *m* may pass between them and into the cylinder, thus connecting the ratchet I and the cylinder together, the same as though the ratchet were formed thereon in the usual manner.

In order to obtain a longitudinal movement of the ejecting device to expel the empty shells from the chambers of the cylinder, a slot, *r*, is formed in the body thereof, through which the ratchet-pin *m* passes in connecting the ratchet to the cylinder, and which pin also serves to retain the spider *s* of the ejecting device in proper position with reference to the chambers in the cylinder, and having only a longitudinal movement. This slot *r* may be located in the stem of the ejecting device instead of in the body thereof, as represented in detached view, Fig. 5.

To return the ejector to its position within the body of the cylinder, for reloading, after having ejected the empty shells from the chambers thereof, a spring, *w*, is placed within the tubular part thereof, and retained in position by resting against the rear end of the fixed ratchet I. Thus, when the ejecting device is pushed forward by pressing upon the end P of its stem to expel the empty shells the spring *w* is compressed between the bottom of its tubular body and the inner end of the ratchet secured to the cylinder; and when the pressure upon the stem is removed, returns the ejector to its seat in the end of the cylinder, as represented in Fig. 1.

Having thus fully described my improvement in extractors for removing the empty shells from the chambers in revolving fire-arms, what I claim therein as new, and desire to secure by Letters Patent, is—

In revolving fire-arms, the combination of a fixed or stationary base-pin or stud, a ratchet secured to the cylinder, and a tubular ejecting device, constructed substantially as herein set forth.

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Witnesses:
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