

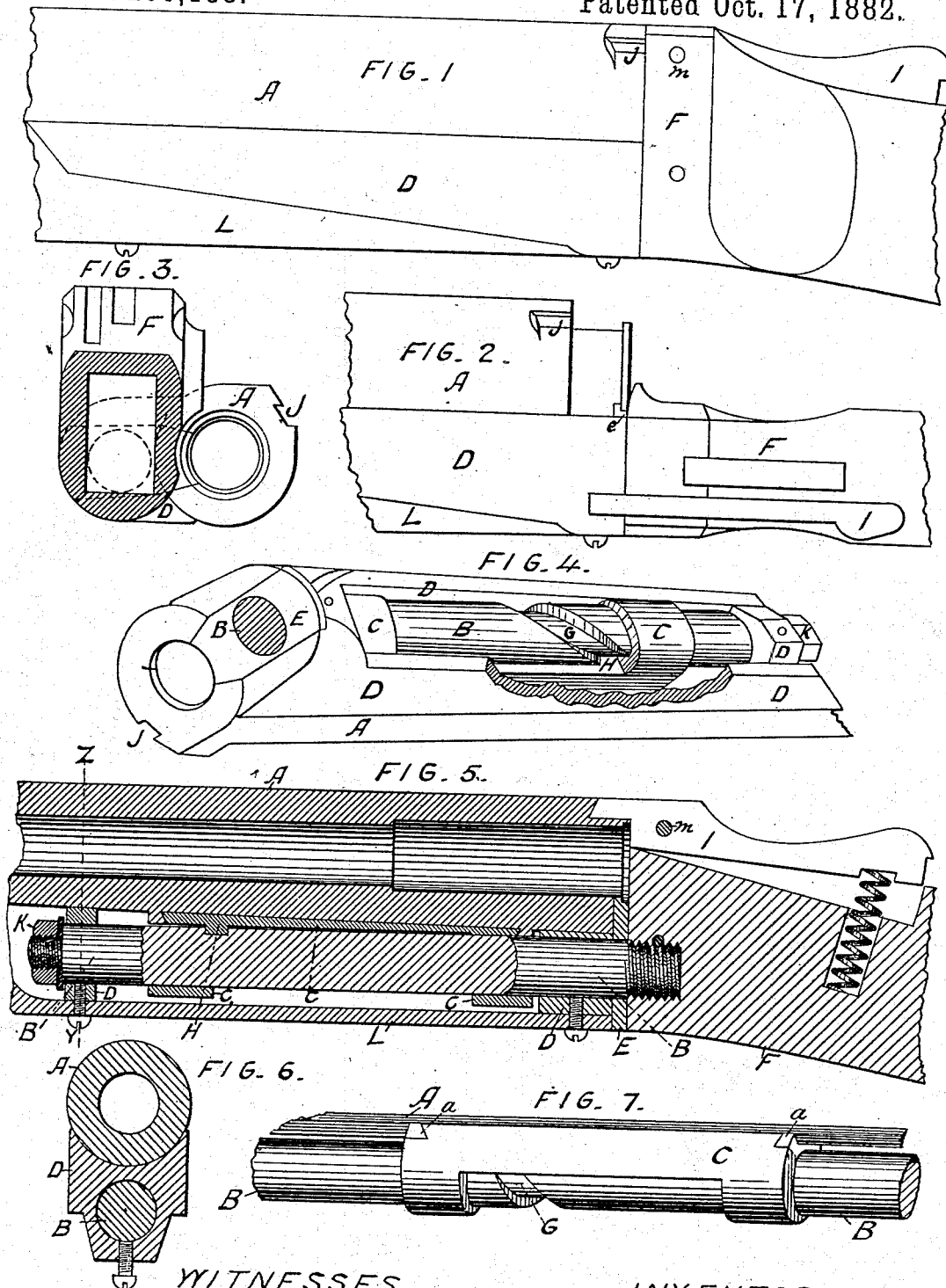
H. R. GRANGER, Dec'd.

A. GRANGER, Administrator.

BREECH LOADING FIRE ARM.

No. 266,133.

Patented Oct. 17, 1882.



WITNESSES.

*William Montroff*  
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INVENTOR.

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# UNITED STATES PATENT OFFICE.

HENRY R. GRANGER, OF NEW YORK, N. Y., (ALBERT GRANGER, ADMINISTRATOR OF SAID GRANGER, DECEASED.)

## BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 266,133, dated October 17, 1882.

Application filed February 27, 1880.

*To all whom it may concern:*

Be it known that I, HENRY R. GRANGER, of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Breech-Loading Fire-Arms, of which the following is a specification.

My invention relates to the mechanism whereby the breech of the barrel is opened to permit the withdrawal of a spent shell and the insertion of a fresh cartridge.

The invention consists in the combination, in a fire-arm, of a breech-piece, a rod secured in and projecting from the breech-piece and having in its periphery a spiral groove or grooves, a fore-stock fitted upon said rod and capable of turning thereon, but incapable of longitudinal movement, and a barrel provided with a socket fitting upon said rod, adapted to turn with the said fore-stock, and provided with one or more projections or threads engaging with the groove or grooves, whereby, upon turning the barrel relatively to the breech-piece, it will be carried forward by the spirally-grooved rod relatively to the fore-stock away from said breech-piece.

The invention also consists in the novel combination, with the above breech-piece, rod, fore-stock, and barrel, of an extractor. The fore-stock is hollow to receive the said rod, which is secured and has a bearing thereon near each end, whereby the fore-stock is afforded an adequate support. The socket with which the barrel is provided preferably consists of a carriage bored out to fit the under side of the barrel. I also combine with the barrel and breech-piece a spring-latch for holding them against turning accidentally relatively to each other.

In the accompanying drawings, Figure 1 represents a side view of a portion of my improved fire-arm. Fig. 2 represents a plan of such portion, the barrel being turned to expose the breech. Fig. 3 represents a transverse section through the breech-piece, showing the breech of the barrel exposed. Fig. 4 represents a perspective view of the under side of the breech portion of the barrel, a portion of the fore-stock being broken away to better illustrate the connection of the barrel with the

rod. Fig. 5 represents a longitudinal section through the arm. Fig. 6 represents a transverse section through the breech of the barrel, the fore-stock, and the rod; and Fig. 7 represents a perspective view of the rod and carriage detached from other parts.

Similar letters of reference designate corresponding parts in all the figures.

Although my invention is applicable both to single and double barreled guns and pistols, a single-barreled gun will serve the purposes of illustration.

F designates the breech-piece, which is provided with suitable lock mechanism. (Not here shown.)

B designates a rod permanently secured in the breech-piece, as here shown, by means of a screw-thread, and projecting forward therefrom.

D designates the fore-stock, which is fitted upon the rod B by means of a collar or bearing upon each end thereof, so that it is free to turn relatively to the breech-piece; but any longitudinal movement of the fore-stock is prevented by the nut K, screwed upon the outer end of the rod B. The fore-stock is hollowed out so as to receive and conceal the rod B entirely within it, and is closed on the under side by a cover, L, which may be removed to afford provision for lubricating the rod B, or for unscrewing the nut K, to enable the fore-stock and barrel to be slipped off the rod B.

A designates a barrel, either rifled or smooth-bore, as the case may be, comprising a socket for fitting upon the rod B and supporting the barrel thereon. As here represented, this socket is comprised in a carriage, C, which is secured firmly to the barrel by means of dovetails *a a*. This construction affords provision for more conveniently making both the barrel and the carriage than if the carriage were permanently attached to the barrel. Near each end of the carriage C is a ring-shaped portion, fitting closely upon the rod B, but free to slide thereon freely, thus affording the barrel a long and adequate bearing upon the said rod. The carriage is provided internally with one or more threads or projections, H, which project therefrom and enter one or more spiral grooves, G, in the rod B, thus holding the bar-

rel longitudinally. It will be understood that the rod B, being held against turning in the breech-piece, if the barrel be turned upon the rod relatively to the breech-piece, it will be advanced forward by the spiral groove or grooves G sufficiently far to expose the breech at the side of the breech-piece, as shown in Figs. 2 and 3.

The extractor E consists of a flat piece of metal fitting upon the rod B, between the breech-piece F and the fore-stock D, whereby it is prevented from longitudinal movement, but is free to turn with the barrel. The extractor fits in a recess in the fore-stock, as shown clearly in Fig. 4, and its edge projects under the rim of a cartridge. As the barrel and extractor are turned upon the rod B, the barrel is moved forward; but as the extractor is prevented from longitudinal movement it partly withdraws the empty shell, whereupon it may be readily taken out and a fresh shell or cartridge inserted.

In order to hold the barrel from accidentally turning relatively to the breech-piece, I provide a spring-actuated latch, I, pivoted by a pin, m, in one of said pieces—in this example of my invention the breech-piece—and adapted to automatically engage with a notch or catch, J, in or affixed to the barrel. This latch, with its actuating-spring, is clearly shown in Fig. 5. The combination of both the longitudinally movable barrel and the fore-stock incapable of longitudinal movement with the rod upon which they both turn is very advantageous, as the hollow fore-stock entirely conceals the grooved rod, and at no time is it exposed. Therefore the liability of its becoming clogged by dust and dirt is greatly lessened. It also enables a gun of very compact and neat appearance to be produced.

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

1. The combination, in a fire-arm, of a breech-piece, a spirally-grooved rod secured therein and projecting therefrom, a fore-stock fitting upon said rod and capable of turning thereon,

but incapable of longitudinal movement, and a barrel provided with a socket fitting upon said rod adapted to turn with the said fore-stock, and provided with one or more projections or threads engaging with the groove or grooves in the rod, substantially as and for the purpose specified.

2. The combination, in a fire-arm, of a breech-piece, a spirally-grooved rod secured therein and projecting therefrom, a fore-stock fitting upon said rod and capable of turning thereon, but incapable of longitudinal movement, a barrel provided with a socket fitting upon said rod adapted to turn with said fore-stock, and provided with one or more projections or threads engaging with the groove or grooves in the rod, and an extractor composed of a plate or piece fitting upon said rod between the fore-stock and the breech-piece, entering a recess in the breech of the barrel and adapted to turn with said barrel and fore-stock, substantially as specified.

3. The combination, in a fire-arm, of a breech-piece, a spirally-grooved rod secured therein and projecting therefrom, a fore-stock fitting upon said rod and capable of turning thereon, but incapable of longitudinal movement, a barrel, an attached carriage fitting upon said rod adapted to turn with the fore-stock, and provided with one or more projections or threads engaging with the groove or grooves in the rod, and a spring-latch for preventing the carriage from accidentally turning upon the rod, substantially as and for the purpose specified.

4. The combination of the breech-piece F, the spirally-grooved rod B, the fore-stock D, fitting upon said rod, the nut K for preventing longitudinal movement of the said fore-stock, the barrel A, and its attached carriage C, provided with one or more projections or threads, H, substantially as specified.

HENRY ROE GRANGER.

Witnesses:

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