

UNITED STATES PATENT OFFICE.

EDWIN S. LEAYCROFT, OF BROOKLYN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO COLTS PATENT FIRE-ARMS MANUFACTURING COMPANY, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN REVOLVING FIRE-ARMS.

Specification forming part of Letters Patent No. 112,472, dated March 7, 1871.

To all whom it may concern:

Be it known that I, EDWIN S. LEAYCROFT, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Revolving Fire-Arms; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

My invention relates to revolving chambered breech fire-arms adapted for metallic-cased cartridges, and relates especially to that kind in which the cartridges are loaded into the front instead of the rear end of the breech.

My said invention is a novel device for facilitating the removal of the spent-cartridge cases or the cartridges themselves from the chambers of the breech; and it consists in a shell-ejector located at the rear of the cylinder or breech and acting forward to thrust the cartridge cases out at the front of the breech, in combination with a gate or stop placed at the front of the breech and serving to prevent the protrusion of the cartridges or cases, when these are so combined that the first part of the movement of the mechanism which actuates the ejector shall, before the ejector acts on the shell, cause the opening of the gate on removal of the stop, while by a continuance of the movement of the said device the ejection of the shell may be effected, substantially as hereinafter described.

A shell-ejector at the rear end of the cylinder and a movable stop at the front have been used in combination in a revolver before my invention, but have been independent of each other as to their movements and disconnected in their action, requiring that the gate should first be removed before operating the ejector, which must afterward be worked by a process separate and distinct from that which effects the opening of the gate.

It is the object of my invention to enable the emptying of each chamber of the breech to be effected by a single operation when the ejector is located at one end of the cylinder and the gate or stop at the other.

To enable others to make and use my invention, I will proceed to describe its application to a pistol, referring in what immediately fol-

lows to the first three figures of the drawings, in which—

Figure 1 is a side elevation of such parts of the pistol as should be shown to illustrate my invention; Fig. 2, a cross-section at line A B, and Fig. 3 a cross-section at line C D.

a is the frame of the pistol, *b* the barrel, and *c* the cylinder or chambered breech, a portion of which is broken away to show the interior of *d*—one of the chambers. This chamber is shown of proper form to receive a cartridge the metallic case of which reaches quite to the front end of the chamber, and is flanged at the mouth. A cartridge of this kind is shown in a patent to D. Williamson, dated January 5, 1864.

e is a fixed plate lying nearly in contact with the front end of the cylinder *c*. The outline of this plate is shown in Fig. 2. It is of such shape that the edge of the plate overlaps the edges of the mouths of all the breech-chambers except one. The place where it does not thus overlap is indicated by *f*. This place receives the end of a stop or gate, *g*, which may be removed or opened so as to permit the loading or emptying of any chamber when it is brought into line with the place *f*; but when the stop *g* is in place, then all the cartridges which may be in the breech-chambers are kept from moving forward. A movable stop of this kind is shown in a patent granted to Daniel Moore, April 28, 1863.

The stop *g* forms part of a lever, *h*, the fulcrum of which is at *i*, at one side of the frame *a*, below the cylinder and near its rear end. The part *k* of the lever *h* behind the fulcrum is curved upward and forward, and forms the ejector. This is so shaped that when the lever *h* is turned downward about the fulcrum the ejector, after the lever has been moved some distance, (but not at first,) enters the breech-chamber, which is in line with it, through an aperture at the rear of the chamber. The ejector is shown in its most forward position by the dotted lines of Fig. 1. The lever *h* is so shaped at *l* that it may readily be grasped to operate it.

It will be understood by noticing the relative position and arrangement of the parts, as shown in the drawings, that to expel the car-

tridges or shells from the cylinder *c* all that is necessary is to bring the several chambers successively into line with the line of action of the extractor, and to work the ejector *k* by the lever *h*. This at the same time causes the removal of the stop *g* from in front of the breech-chamber. The extractor *k* will enter the chamber *d* far enough to thrust the shell out forward to an extent which will permit it to be removed by the fingers. When the breech-chambers are to be loaded the lever *h* is moved into a position about midway between those indicated in Fig. 1. This withdraws the ejector from the chambers without closing the gate *g*, and the cartridges may be placed in the cylinder by bringing the chambers in line with the plate *f* of the covering-plate *e*. Afterward the gate may be closed.

Figs. 4 and 5 show the side elevation of parts of a pistol and exhibit an application of my invention in one of its modifications. Fig. 6 is a cross-section at line X Y.

a' is the pistol-frame; *b'*, the barrel; *c'*, the cylinder; *k'*, a sliding ejector, which can enter the breech-chambers through holes at the rear;

h', a lever acting on the ejector through a toothed sector engaging with a rack on *k'*, and *g'* a gate hinged to the frame and pressed by a spring, which tends to open it.

The parts are so arranged and proportioned that when the lever *h'* is in the position shown in Fig. 4 its end presses against one part of the gate *g'* and holds it closed. The ejector is in this position of the lever withdrawn from the chambers. When the lever is turned down, as in Fig. 5, the gate being released from restraint is opened by its spring and the ejector is forced forward to expel the cartridge-shells.

Having thus described two methods of applying my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the ejector *k* and gate *g*, when located at opposite ends of the revolving breech, so that the act of operating the ejector effects the removal or opening of the gate, substantially as and for the purpose set forth.

EDWIN S. LEAYCROFT.

Witnesses:

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