

(No Model.)

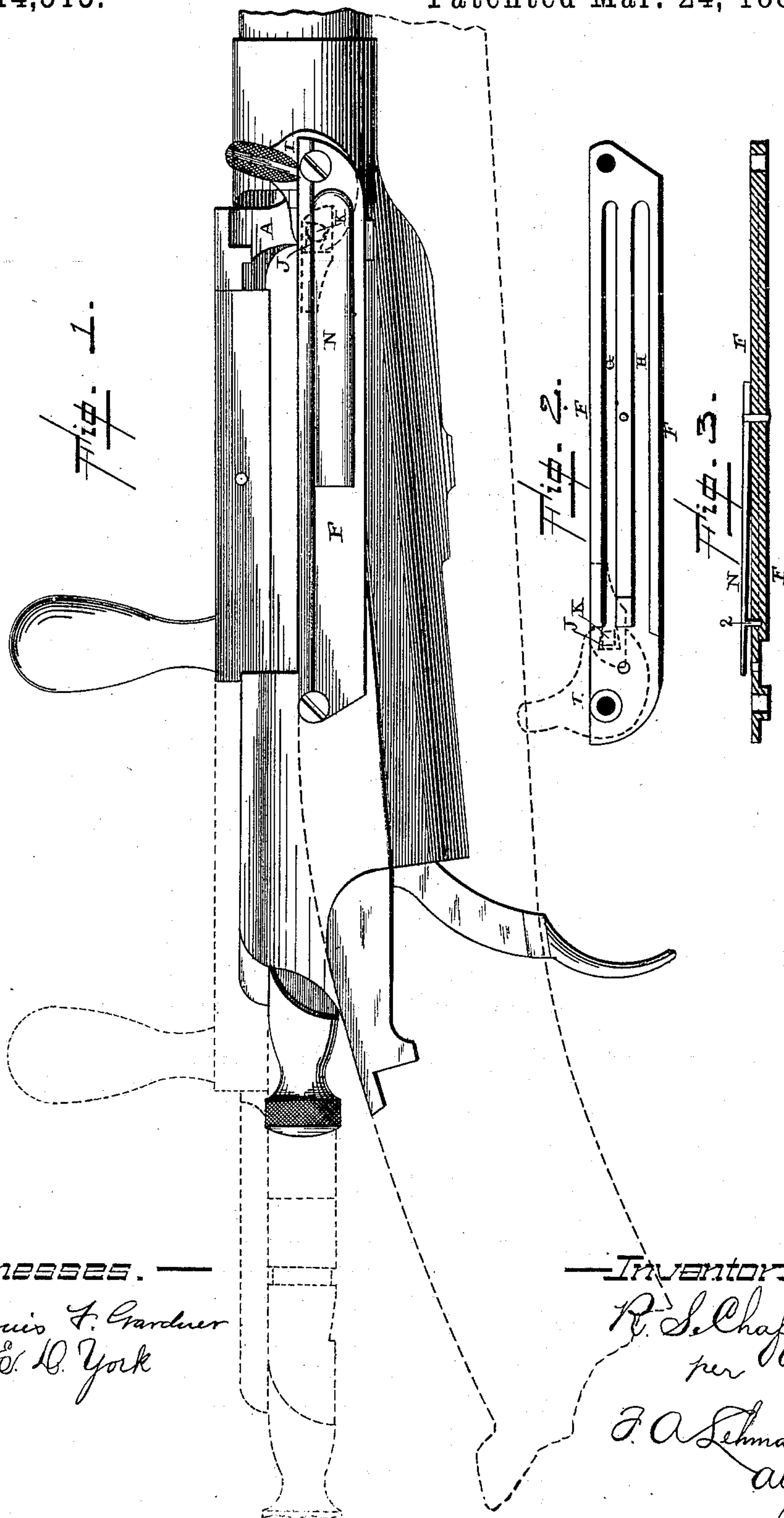
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R. S. CHAFFEE.

FEEDING MECHANISM FOR BREECH LOADING FIRE ARMS.

No. 314,515.

Patented Mar. 24, 1885.



—Witnesses.—

Louis F. Gardner
C. H. York

—Inventor.—

R. S. Chaffee
per
J. A. Schmann,
att'y

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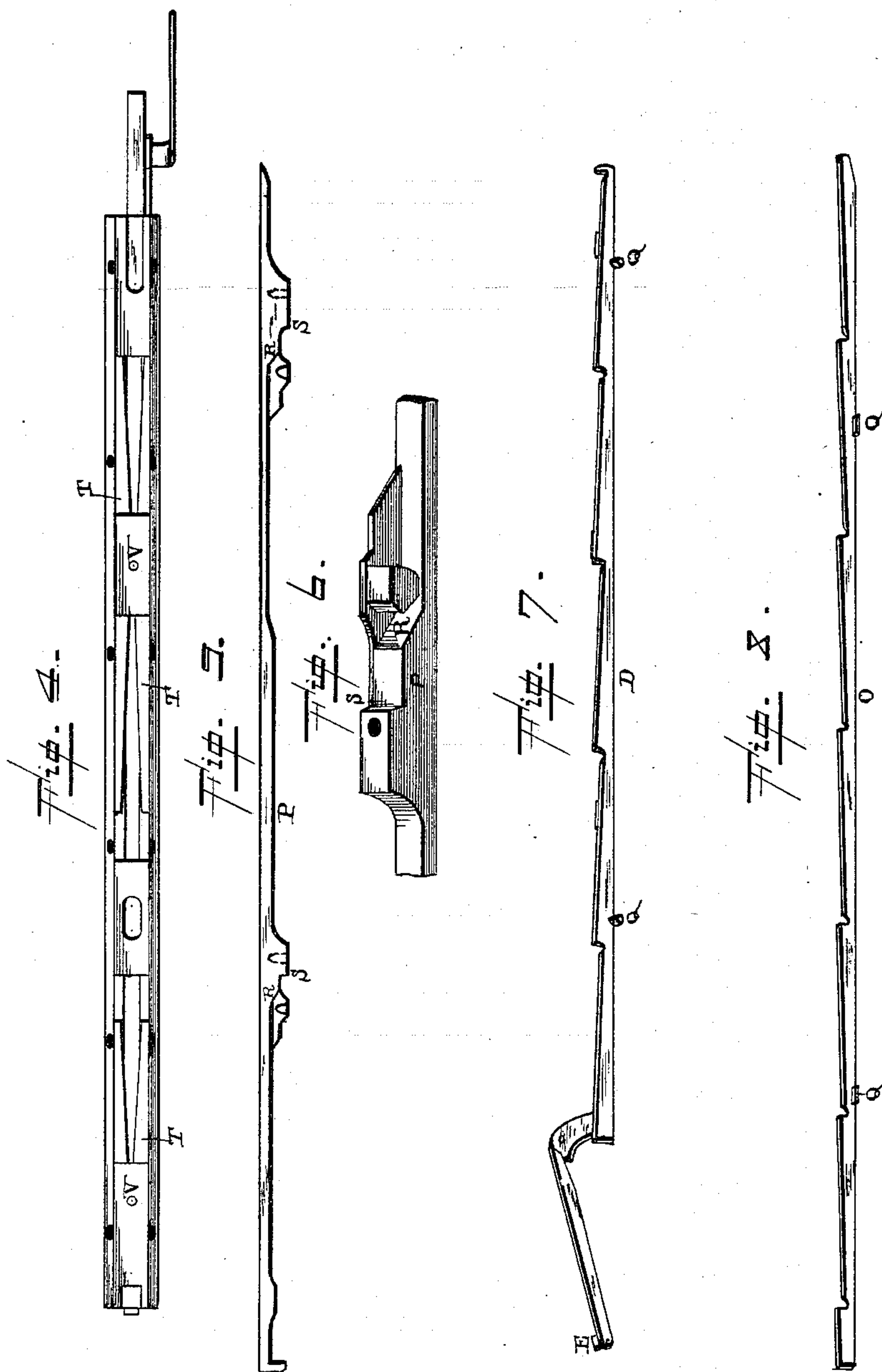
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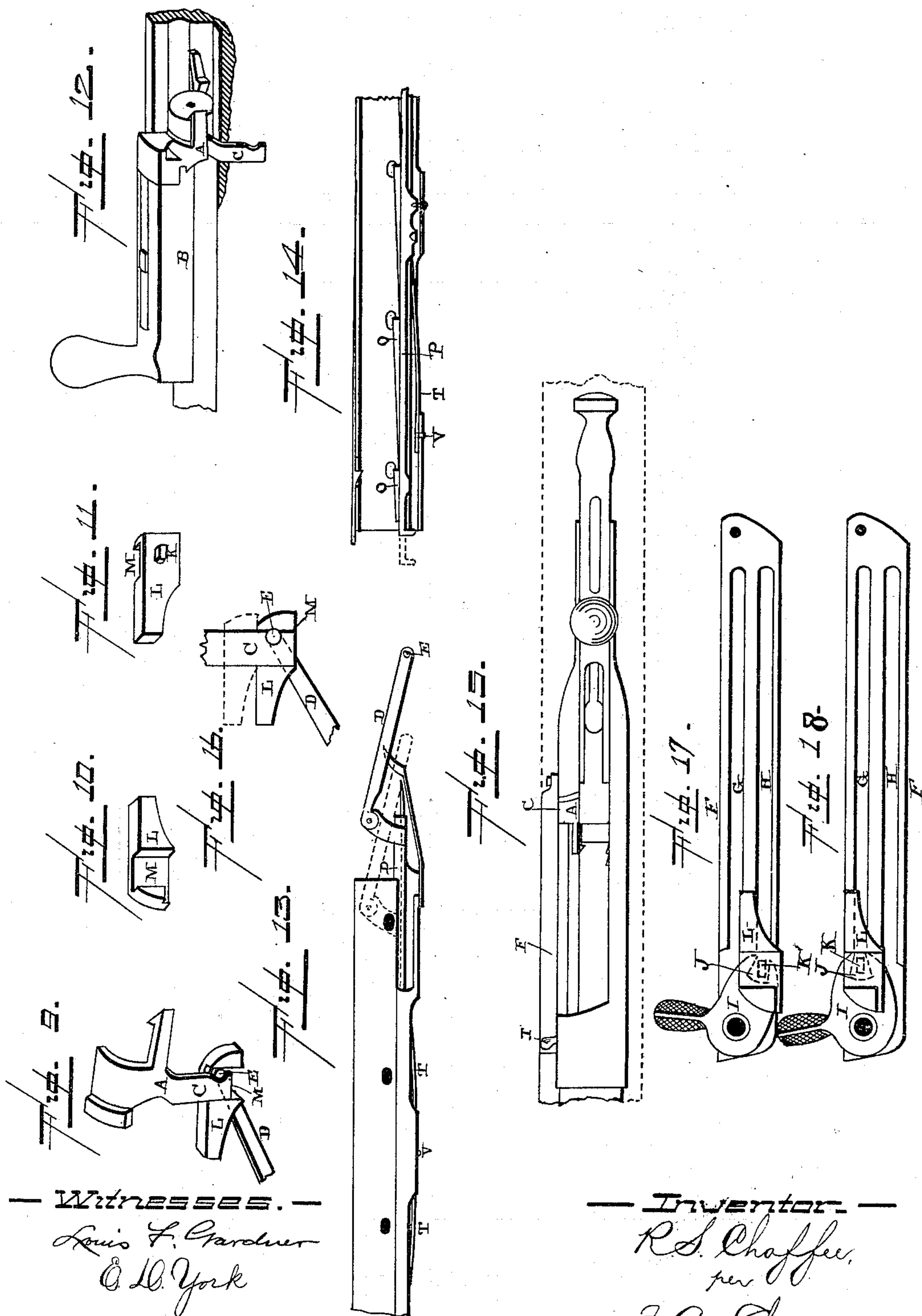
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UNITED STATES PATENT OFFICE.

REUBEN S. CHAFFEE, OF SPRINGFIELD, ILLINOIS.

FEEDING MECHANISM FOR BREECH-LOADING FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 314,515, dated March 24, 1885.

Application filed February 9, 1883. Renewed April 22, 1884. Again renewed December 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, R. S. CHAFFEE, of Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Feeding Mechanism for Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in breech-loading fire-arms, and is intended as an improvement upon an application filed by me December 5, 1881; and it consists, first, in the combination of the loading-bars, one of which has a suitable projection formed upon its front end, with a grooved plate, which is secured to the side of the receiver, with a pivoted shifting device, whereby the loading-bar, having a projection on its front end, may be connected to and disconnected from the cartridge-extractor; second, in the peculiar construction of the loading-bars, whereby the endwise movement of the central bar is made to depress the two ratchet-bars, so as to allow the cartridges to be slipped freely in; third, in the arrangement and combination of parts, which will be more fully described hereinafter.

The main object of my invention is to provide a means for connecting the loading-bars to and disconnecting them from a cartridge-extractor attached to the firing-bolt, the means being held stationary upon the gun instead of being made to move back and forth with the firing-bolt, as shown and described in my former application.

Figure 1 is a side elevation of my invention, the stock being removed so as to show the connecting parts. Figs. 2 and 3 are detached views of the grooved plate. Figs. 4, 5, 6, 7, 8, 13, and 14 are detached views of the loading-bars. Figs. 9, 10, 11, 12, 15, 16, 17, and 18 are detail views of the cartridge-extractor and the plate for locking the front end of the loading-bar to the extractor.

With the exception of the parts hereinafter described, the gun is the same or very similar to what is shown in my former application,

and therefore need not be more fully described in this application.

As in the former application, the cartridge-extractor A is removably attached to the front end of the firing-bolt B, so as to be carried back and forth therewith. This cartridge-extractor has an arm, C, projecting down outside of the receiver, for the purpose of engaging with the front end of the loading-bar D, which has a projection, E, formed upon one side.

Secured to the side of the receiver is the plate F, which is provided on its inner side with the grooves G H, in which the front end of the loading-bar D and the locking-plate L are made to move back and forth by the movement of the firing-bolt B. The arm C of the cartridge-extractor extends down in between this plate and the side of the receiver, and engages with the projection E on the front end of the loading-bar D when it is desired to connect the firing-bolt with the magazine. When, however, it is desired to use the gun as a single-loader, the arm C will slide freely back and forth with the firing-bolt without interfering with the loading-bar in any manner.

The notch in the front edge of the arm C comes just opposite the lower groove, H, and it is at this point that the front end of the loading-bar D is locked to the arm C by the plate L. When the arm C and the front end of the loading-bar D are not locked together, the plate L is moved above the projection E, as shown in dotted lines in Fig. 16, and then, when the arm C is carried backward by the movement of the firing-bolt B, the front end of the loading-bar D remains stationary at the front end of the groove H. When the locking-plate L is depressed below the groove G, it catches over the front edge of the projection E, as shown in Fig. 16, and locks the firing-bolt D to the front edge of the arm C. Then, when the arm C is moved back and forth by the firing-bolt, both the locking-plate L and the front end of the loading-bar D are carried with it. When the locking-plate L is raised in the position shown in Fig. 16, it is moved back and forth in the groove G by the arm C without operating the loading-bars. This shifting vertically of the plate L and unlocking of the front end of the loading-bar C can only take place at the

front end of the grooved casting, where the shifting device I is located. The connection between the arm C and the front end of the loading-bar D takes place in front of the groove H, because when the plate L is moved upward by the shifting device I opposite the groove G the plate L moves beyond the notch in the front edge of the arm C, and hence there is nothing to lock the two parts together. While the plate L is opposite to the groove G the plate L is carried back and forth with the arm C; but the loading-bar D remains stationary, ready to be connected to the arm C whenever it is desired to throw the magazine into operation by forcing the plate L downward again. The front end of the loading-bar remains in position at the front end of the slot H, ready to be connected to the arm C at any time.

For the purpose of connecting and disconnecting the loading-bar D and the cartridge-extractor, which is carried back and forth by the bolt, there is pivoted between the front end of the plate and the side of the receiver a shifting plate or device, I. The upper end of this shifting device forms a simple projection against which the fingers can be made to catch for the purpose of moving the device back and forth upon its pivot, while its lower end projects backward a suitable distance, and has a recess, J, made in it. This recess J catches over the projection K, which is made upon the locking-plate L. This plate L has its side cut away at one of its ends, as shown at M, and is forced to move up and down before the front ends of the grooves G H. When the upper end of the shifting device is forced forward, it raises the locking-plate L in front of the upper groove, G, and the projection E upon the front end of the loading-bar D having nothing to lock it in the notch in the front end of the arm C on the cartridge-extractor, the loading-bar is no longer moved back and forth with the firing-bolt for the purpose of throwing into operation the magazine. When, however, the front end of the shifting device I is moved backward, and the recess J forces the plate L downward opposite the lower groove, the plate, by means of the recess M, serves to lock the front end of the loading-bar D and the cartridge-extractor together, and thus throwing the magazine into operation. For the purpose of holding the shifting device I in any position in which it may be adjusted, the spring N is applied to the outer side of the plate F, and this spring has a small projection, 2, which passes through the side of the plate and catches against the shifting device I, so as to hold it in any position into which it may be adjusted.

The great advantage of a shifting device which remains stationary while the firing-bolt is being moved back and forth consists in that the device is not likely to become disconnected from the loading-bar, and is not in the way of the person handling the gun.

In the magazine there are the two ratchet

or loading bars D O and the central rod, P, which is connected with and operated by the breech-plate, as described in my former application. The difference in the construction here shown and that shown in my former application consists in the construction of the lower side of the rod P. As each of the loading or ratchet bars D O has suitable projections, Q, which catch against the under side of the rod P when the rod P is moved endwise by the opening of the breech-plate, these projections are brought in contact with the inclines R, formed on the under side of the rod P, and these inclines force the bars D O downward, so that their upper edges will not project above the top of the rod P, and thus allow the cartridges to be poured freely into the magazine. The ratchet-bar O has no other movement than a rising and falling one in relation to the rod P, while the ratchet-bar D is carried back and forth with the firing-bolt for the purpose of moving the cartridges forward. The projections Q upon this ratchet-rod D differ slightly in form from those upon the rod O, and the rod P has the shoulder or shoulders S formed upon it for the purpose of stopping the movement of the rod D.

The two braces D O are held braced upward, so that their upper edges will project above the top of the rod P by the two springs T. These springs have their ends formed into prongs, and the prongs then bear upon the rods D O without touching the rod P. One of the springs is provided with four prongs, while the other has but two; but both springs are provided with a projection, V, which snaps into the opening made through the bottom of the magazine-tube to receive them. By forming these projections V upon the springs they have but to be pushed into place, and there they are held without the use of screws or other fastening devices, which have to be removed whenever it is desired to remove the loading bars or ratchets.

Having thus described my invention, I claim—

1. The combination, in a breech-loading fire-arm, of an arm which is attached to the firing-bolt, a grooved plate or casting secured to the side of the gun opposite to the firing-bolt when in position, a vertically-moving locking-plate which is carried back and forth on the arm which is attached to the firing-bolt, a pivoted shifting device for moving the locking-plate, and the loading-bars, one of which is provided with a connecting-rod which is adapted to be connected to and disconnected from the arm on the firing-bolt, substantially as shown.

2. In a breech-loading fire-arm, the combination of the grooved plate or casting which is applied to the side of the receiver, an arm which is secured to the firing-bolt so as to move back and forth therewith, and which arm has a groove or recess in its front edge, a vertically-moving locking-plate which is carried back and forth by the arm, a shifting

device for moving the locking-plate, and the loading-bars, one of which is provided with a connecting-rod which has a projection upon its front end, and which connecting-rod is adapted to be connected to and disconnected from the arm that is secured to the firing-bolt, substantially as described.

3. The combination of a magazine-tube provided with holes in its lower edge with the loading-bars D O P, which are placed therein, the springs T, having their ends pronged, as shown, and provided with the small pro-

jections V, which snap into the holes or recesses formed in the lower edge of the magazine-tube, the prongs of the springs being made to bear against the bars D O, for the purpose of forcing them upward, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

REUBEN S. CHAFFEE.

Witnesses:

P. D. TYRRELL,
J. E. HILL.