

UNITED STATES PATENT OFFICE.

EDWARD A. WEISHEIT, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

EXTRACTOR-DETENT FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 617,943, dated January 17, 1899.

Application filed March 21, 1898. Serial No. 674,567. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. WEISHEIT, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Extractor-Detents for Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken view, partly in plan and partly in section, of a gun provided with one form of my improved extractor-detent, the extractor and breech-block of the gun being shown at the limit of their rearward positions; Fig. 2, a corresponding view showing the detention of the extractor by the detent while the breech-closure is moving forward and coming up with the forward end of the extractor; Fig. 3, a broken view, in vertical section, on the line *a b* of Fig. 2 and showing the extractor-detent as engaged with the extractor; Fig. 4, a view in vertical transverse section on the line *c d* of Fig. 3; Fig. 5, a detached plan view of the extractor; Fig. 6, a detached plan view thereof in outside elevation; Fig. 7, a detached view of one of the modified forms which the extractor-detent may assume; Fig. 8, an end view thereof.

This invention relates to an improvement in extractors for firearms and is particularly designed for use in conjunction with the magazine bolt-gun shown and described in Patent No. 547,583, granted October 8, 1895, to James Paris Lee, the object of my present invention being to reduce to the minimum the liability of breaking or deranging any part of the extractor.

With these ends in view my invention consists in the combination, with a breech-closure, of an extractor movable independently thereof and a spring-actuated extractor-detent arranged to engage with the extractor and hold the same in its extreme retracted position, with its forward end extending beyond the forward end of the breech-closure, until the same has in its forward movement come up with the forward end of the extrac-

tor, which the detent then releases and permits to be carried forward by the breech-closure.

My invention further consists in certain details of construction, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention as herein shown I employ a small plunger A, located in the upper end of a vertically-arranged cylindrical chamber B, formed in the rear portion of the left-hand wall C of the gun-frame C'. The plunger itself projects upward through a small hole *a*, leading out of the upper end of the chamber B into the path of the extractor D, the lower edge of the rear end of which is formed with a transversely-arranged notch *d* for the reception of the rounded end of the plunger, the rear portion of the notch being shaped to form a relatively sharp shoulder, while the forward portion of the notch is beveled and merges gradually into the lower edge of the extractor. A spiral spring E, located in the chamber B, exerts a constant effort to lift the plunger, this spring being retained in place by means of a screw F, which plugs up the lower end of the said chamber. I do not, however, limit myself to any particular form or arrangement for the spring which controls the plunger.

The extractor D is provided with a spring D' and corresponds in general construction, arrangement, and mode of operation to the extractor shown in the Lee patent aforesaid. The breech-block G also corresponds in general construction, arrangement, and operation to the breech-block of the said patent. I speak of this part as a "breech-block" because it is moved not only back and forth in a straight line, but also up and down, instead of simply back and forth, as bolts pure and simple are moved. However, my improvement is applicable to guns having breech-blocks or breech-bolts or other kindred forms of breech-closures.

Inasmuch as the operation of the breech-block and extractor are substantially the same as the operation of the corresponding parts in the gun of the Lee patent before referred to, it seems unnecessary to further describe the detailed construction and oper-

ation of these parts or to do more than specify the operation of the spring-actuated extractor-detent, which constitutes the gist of my present invention. In the description of the operation of the said detent I may say that when the extractor D reaches the limit of its rearward movement, as shown in Fig. 1, the spring-actuated plunger A snaps into its notch *d*, as shown by broken lines in Fig. 1. After this the breech-block moves slightly rearward and then reaches the limit of its open position, as also shown in Fig. 1. Now when the breech-block begins its forward movement it does not, notwithstanding the friction between it and the extractor, start the same forward (except to engage the rear wall of its notch *d* with the plunger) until its forward end has come up with the forward end of the extractor, as shown in Fig. 2, at which time the block is positively engaged with the extractor. The forward push on the block then overcomes the spring of the plunger which retires to permit the block and extractor to move forward together in the positions in which they are shown in Fig. 2.

In the Lee patent referred to the extractor-spring D' is employed to act as an extractor-detent, but under some disadvantages, which are entirely overcome by the employment of an independent spring-actuated detent, as herein shown and described.

It is apparent that in carrying out my invention some modifications in the extractor-detent may be resorted to. Thus I may find it convenient to employ an extractor-detent consisting of a flat spring H, adapted to be located in the path of the extractor and pro-

vided with a small projection H' to enter a notch in the extractor. Such a modified detent is shown in Figs. 7 and 8. I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes in the construction as fairly fall within the spirit and scope of my invention.

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

1. In a firearm, the combination with a breech-closure, of an extractor movable independently thereof, and a spring-actuated extractor-detent organized independently of the extractor and arranged to engage with the same and temporarily hold it in its retracted position.

2. In a firearm, the combination with the breech-closure thereof, of an extractor movable independently thereof, and a spring-actuated extractor-detent consisting of a plunger arranged to engage with the extractor when the same is in its retracted position and detain the same and hold it against forward movement while the breech-closure is moving from its open position and coming up with the forward end of the extractor, which it then picks up and carries forward.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDWARD A. WEISHEIT.

Witnesses:

DANIEL H. VEADER,
THOS. C. JOHNSON.