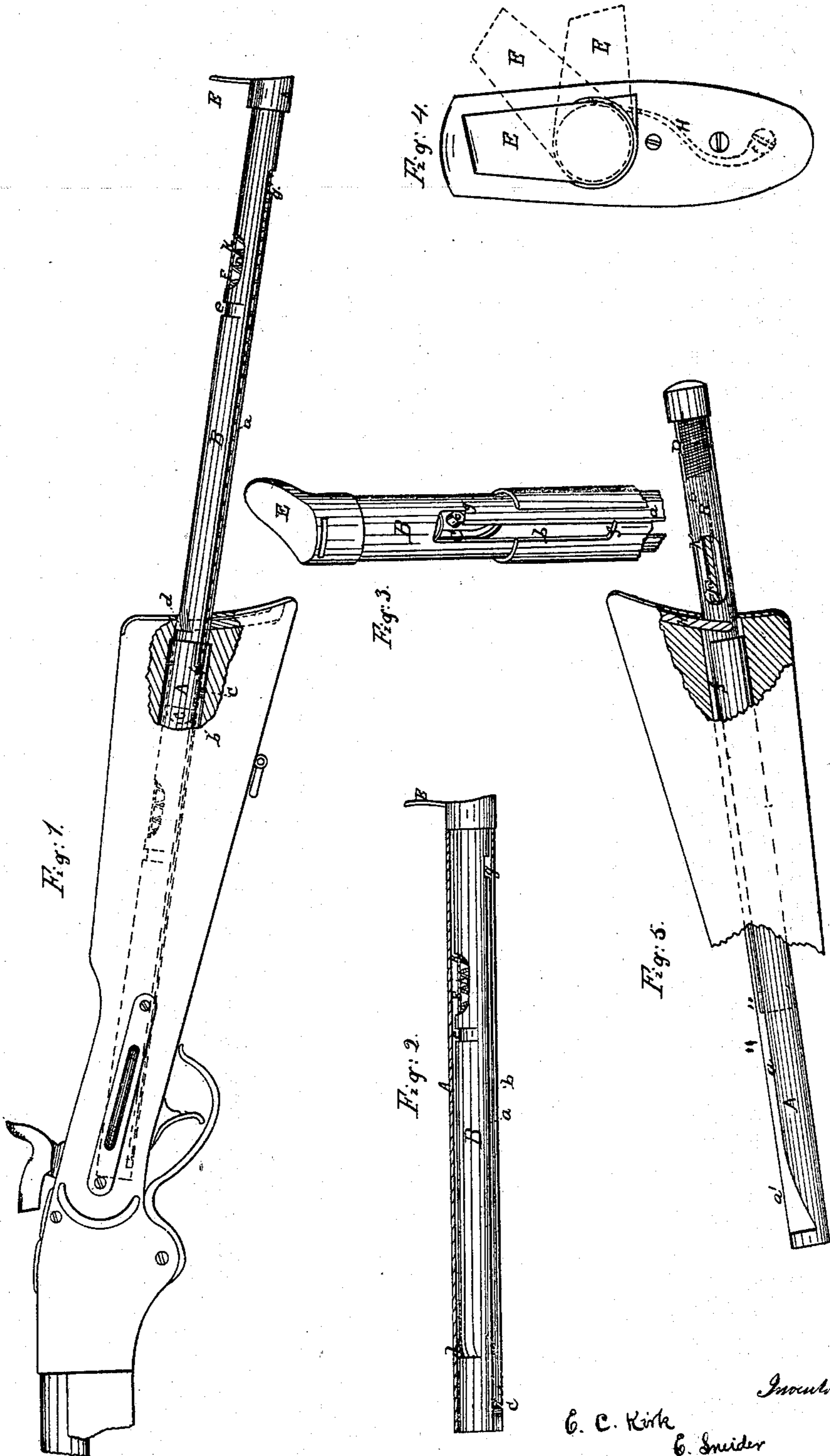


E. C. Kirk & E. Snieder
Magazine Fire-arm.

N^o 66596.

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Witnesses

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UNITED STATES PATENT OFFICE.

E. C. KIRK AND E. SNEIDER, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **66,596**, dated July 9, 1867.

To all whom it may concern:

Be it known that we, E. CLARENCE KIRK and E. SNEIDER, of the city of Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Magazine Fire-Arms; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of the butt of a carbine, illustrating the follower-tube drawn out; Fig. 2, a central longitudinal section of the magazine-tube, showing in elevation the follower-tube in position therein; Fig. 3, a perspective view of the outer ends of the two tubes, illustrating the relative position of the slots in each and their offsets; Fig. 4, plan view of the butt-plate, illustrating the movements of the follower-tube; and Fig. 5, a side elevation of a part of the gun-stock, showing the follower-tube in the position for loading, and illustrating the position of the curved offset in the inner end of the magazine-tube.

Similar letters indicate like parts in all of the figures.

The nature of our invention consists of improved devices for retracting or compressing the spring in the follower-tube of a magazine fire-arm, and for arresting and subsequently releasing the same, and also in so constructing the tube as that the magazine may be loaded with cartridges without wholly withdrawing said tube from the gun.

In the magazine for fire-arms now in use the cartridges are usually pressed forward to the feeding devices, which introduce them into the chamber of the gun by means of a spring contained within a tube fitting closely within the magazine-tube, and in loading the magazine it becomes necessary to withdraw this spring follower-tube entirely from the gun in order to load the magazine and obtain a compression of the spring upon the cartridges. This prevents loading in action or in motion, and often results in the loss of the follower-tube thus withdrawn and a consequent entire disablement of the gun. Our improvements remedy these objections by providing a follower-tube wherein the spring may be compressed and cartridges inserted to load the

magazine without its detachment from the gun.

To enable others skilled in the art to make and use our invention, we will proceed to describe the construction and operation of our device.

The magazine-tube A is secured in the gun-stock, and connected at its inner end with the feeding mechanism of the gun in the usual manner as found in Spencer's patent rifle, and it is provided with a concentric spring follower-tube, B, fitting closely, yet sliding freely therein, and which is fitted with a plunger, C, (see Fig. 3 and dotted lines, Fig. 1,) working in said tube B, and actuated by a spring, D, inclosed therein.

A narrow slot, *a*, is cut longitudinally in the follower-tube from a point near the lower or front end to the upper outer end thereof, and a pin or screw, *c*, secured in the side of the plunger C, plays in said slot. The outer magazine-tube, A, inclosing the follower-tube B, is also slotted longitudinally along its entire length to receive the head of the plunger pin or screw *c*, which projects through the slot *a* in said inner tube, B. Offsets *f* and *g*, Fig. 3, are formed in both tubes near the outer ends of said slots, but on opposite sides of the line thereof, as illustrated in Fig. 3.

The upper or outer end of the inner spring follower-tube, B, is closed and provided with a handle, E, so formed as to fit closely upon the butt-plate of the gun when the tube is pressed down in the magazine, as illustrated in the positive black lines of Fig. 4.

A short distance from its outer end, and at a point opposite the slot in the tube B, an aperture, K, Figs. 1 and 5, is pierced in its side of sufficient size to allow a cartridge to be introduced through the same into said tube, as shown in Figs. 1 and 5. A small flat spring, F, secured at one end of the aperture, extends across the same to prevent the return of cartridges inserted therein, and also to confine the spiral coils of the spring D within the tube. The pin *c*, extending through the two slots *a b*, and moving freely therein, prevents a rotary movement of the tube B within the fixed magazine-tube A, except at the offsets of said slots.

To allow the handle E to be turned aside, as indicated in red, Fig. 4, when the tube B

is still in place within the magazine, so that the tube may be withdrawn for loading, an offset, *a'*, is formed in the slot of the magazine-tube A, at its lower end, as illustrated in Fig. 5, so that the screw-head *e* may turn at that point of the slot. The upper portion of said offset is made to incline back with a gradual curve to the slot, as seen in Fig. 5, so that in withdrawing the tube by the handle turned as indicated in red, Fig. 4, the screw-head *e*, working against this inclined face of the offset, will automatically turn the tube back into the position indicated in the positive black lines of Fig. 4 and in the elevation, Fig. 1. When the tube B has been thus drawn out from the inner tube, A, so far as that the head of the plunger pin or screw *c* projecting through its slot *a* shall be in register with the offset *f* (see Figs. 3 and 1) in the slot of the outer magazine-tube, A, its further withdrawal is prevented by means of a side spring, H, in the butt of the stock engaging with a notch, *d*, Figs. 1 and 2, cut on the side of the tube to receive it; and now by again turning the inner tube a short distance, (to the position shown in red lines, Fig. 4) the screw is brought into said offset *f* and engages therewith, so that upon pressing down the inner tube in this position the plunger C will be arrested and its spring compressed into the upper end of the tube. When the spring is thus compressed, and the plunger forced into the upper end of the tube B, the offset *g* in the slot *b* of said tube will be in a line with the pin or screw-head *c*. By now turning the tube still farther, as indicated by the blue lines, Fig. 4, the pin *c* will be forced upon the said offset *g* of the inner tube slot, and resting thereon will be retained thereby in its compressed state, as illustrated in Fig. 3, in which the tube B is shown as drawn up partially out of the tube A. When the stop or pin *c* of the plunger is thus made to rest upon the offset *g* and hold the spring in its compressed state, the tube B may be again withdrawn sufficiently far to bring its aperture K outside of the butt, so that cartridges may be inserted through the same into said tube and the magazine of the gun. By means of a second notch, *e*, the spring H arrests the tube at this point also; but this notch is so limited as that by turning the tube into the first position of Fig. 4, the spring H will be disengaged therefrom, and the tube be permitted to slide freely back into its place in the tube, A, with the end of the stop or pin *c* confined between the sides of the slot *a* of the outer tube A, but its shank left free to move along the offset *g* to the slot *b* in the inner tube. Hence by now turning the tube B back to its first position the pin *c* will be carried off from its rest upon the offset *g* into the slot *b*, and the spring be thereby released and left free to bear upon the cartridges in the magazine to force them forward in the gun. As the notches *d* and *e*, which engage the retaining-spring H to control the with-

drawal of the sliding tube B in its ordinary movements, as just described, are so limited in their extent as not to wholly encircle it, the spring may be entirely released from the last notch, and the tube be with facility entirely withdrawn from the gun by turning it entirely beyond the point of engagement for the purpose of cleaning the same.

The movement of my improved tube is simple: The magazine being entirely emptied of its cartridges, and the spring-follower therefore at the lower end thereof, the sliding tube B, containing the spring D and plunger C, is withdrawn to the outer notch, *d*, where it is arrested by the engagement of the side spring H with said notch. At this point the stop *e* is by a partial turn of the tube, as indicated by red lines, Fig. 4, turned into the offset *f*, and thus arrested, and the tube is then forced inward, compressing the spring until when brought fully home, the offset *g* is brought into register with *f*, and by a further turn of the tube this offset is carried under said stop and engages the same. The spring is thus confined in the upper end of the tube above the feeding-aperture K, and by withdrawing the tube slightly this aperture is brought outside of the butt in a proper position to permit the insertion of cartridges therein, as illustrated in Figs. 1 and 5. When so filled the tube is pushed home to its place in the butt, when the turn thereof to bring the handle into proper position on the butt-plate disengages the spring-stop *e* from the offset *g*, and, leaving it free to play down the slots *a b*, brings the action of the spring to bear fully upon the cartridges.

We contemplate placing a spiral spring in the butt to operate a catch working against the tube B, or to press immediately against this tube, as an equivalent for the flat spring H in arresting the outward movement of the tube; and the spring might in some cases be secured to the tube and be made to operate against a suitable projection or catch on the butt or butt-plate.

Although we regard the arrangement of offsets in combination with longitudinal slots in the tubes A and B as affording the simplest device for obtaining an automatic retraction, detention, and release of the spring-actuated plunger, we nevertheless contemplate the use of any suitable device—such as a spring-catch, a hook, or short lever, &c.—for retaining the spring in the outer end of the sliding tube B after its compression, and until the magazine has been duly filled with cartridges, our invention having mainly reference to the automatic retraction of the spring without withdrawing the magazine-tube wholly from the gun.

Having thus fully described our improvements, we claim therein as new and desire to secure by Letters Patent—

1. Confining the sliding magazine-tube of a repeating fire-arm by means of a spring, forming an adjustable detent, permitting at pleas-

ure the entire withdrawal of the tube from the gun, substantially in the manner herein set forth.

2. The combination of an inner longitudinally-slotted magazine-tube, B, with an inclosing longitudinally grooved or slotted tube, A, and with a feeding mechanism of a repeating fire-arm, all substantially in the manner and for the purpose herein set forth.

3. The combination and arrangement of slot Q and offset *g* in the magazine-tube B with slot or groove *b* and offset *f* in stationary inclosing-tube A of a repeating fire-arm, for the purpose of automatically retracting and de-

taining the plunger C of the magazine-tube, all substantially as herein set forth.

4. The combination of a guard-spring, F, with the loading-aperture K of a magazine-tube, B, when said aperture is formed in the side of the tube, substantially in the manner and for the purpose herein set forth.

The foregoing specification of our improvement in magazine fire-arms signed by us this 7th day of March, A. D. 1867.

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E. SNEIDER.

Witnesses:

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W. T. BROWNING.