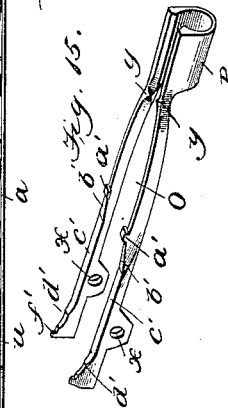


2 Sheets—Sheet 1.

Patented July 10, 1894.



Inventor
E. E. Dyball.
By Wm. E. Dyre.
Attorney

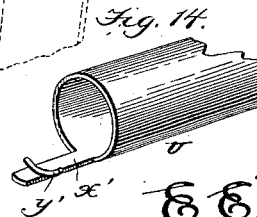
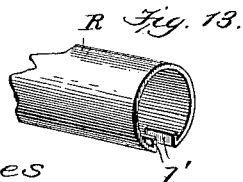
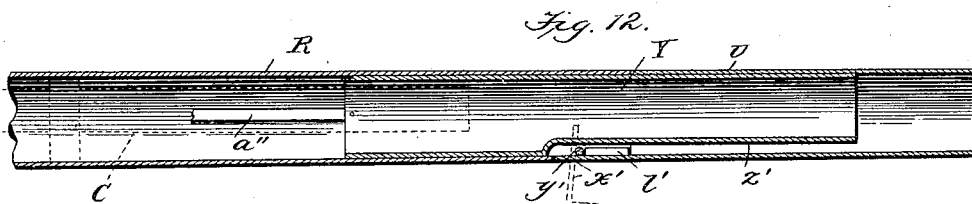
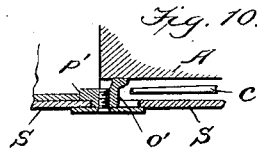
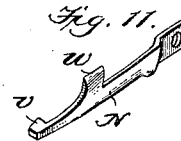
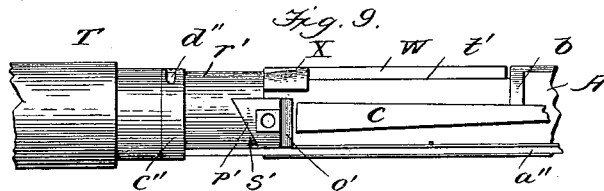
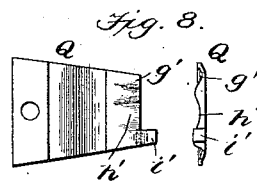
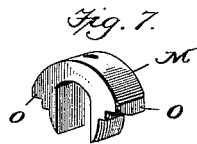
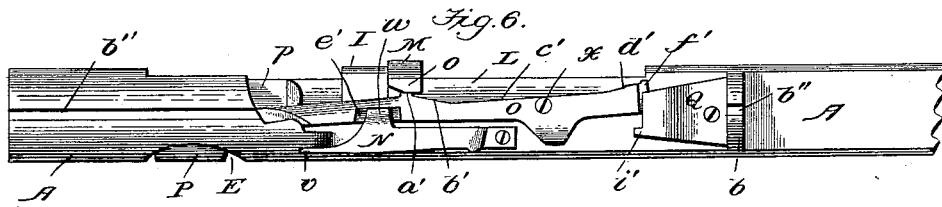
(No Model.)

2 Sheets—Sheet 2.

E. E. DYBALL.
MAGAZINE CANE GUN.

No. 522,886.

Patented July 10, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

ERNEST E. DYBALL, OF SALEM, OHIO.

MAGAZINE CANE-GUN.

SPECIFICATION forming part of Letters Patent No. 522,886, dated July 10, 1894.

Application filed February 21, 1894. Serial No. 500,941. (No model.)

To all whom it may concern:

Be it known that I, ERNEST E. DYBALL, a citizen of the United States, residing at Salem, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Repeating Firearms; 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 appertains to make and use the same.

My invention relates to breech-loading repeating fire-arms, and has special reference to that class in which a longitudinal bolt or follower carrying a spring actuated firing-pin is employed for placing cartridges in the breech of the barrel; and the invention has for its primary object the combination and arrangement with said bolt and firing-pin of improved means whereby a cartridge may be exploded, the shell extracted and ejected from the fire-arm, as its bolt is retracted, and simultaneously therewith an unexploded cartridge delivered into the breech of the gun.

The invention is further designed, arranged, and adapted to render the arm more compact than others of its class, to insure certainty of action, and to lessen its cost of construction; it being possible in this instance to place the necessary mechanism of a repeating or magazine gun within the confines of an ordinary walking cane, as shown.

The invention consists further in means for locking the separable parts of the arm against a possible breech-movement, when being used as a cane; of locking the trigger against an accidental discharge of the gun; and means whereby a cap or ferrule at the remote end of the device may be automatically displaced during a breech-movement of the piece.

The invention further consists in certain construction, combination, and arrangement of parts as will more fully appear in the following description, and will be specifically pointed out in the claims.

In the accompanying drawings which form part of this specification, and in which like letters indicate like parts wherever employed: Figure 1, represents a side elevation of a cane-gun embodying my invention; Fig. 2, a plan view of that portion of same back of the barrel, with outer case removed, showing the main forging or frame of the invention

stripped of its charging, firing, and extracting mechanism; but showing a firing-lever or sear, and ferrule-removing rods on either side. Fig. 3, is a side elevation of same, omitting the cane-handle, and showing bend in one of the ferrule-removing rods. Fig. 4, is a longitudinal vertical section through the magazine and firing mechanism, with hammer at full-cock ready for firing. Fig. 5, is a fragmentary plan view taken at the breech of the gun, showing the bolt or follower, the extractor, and the bifurcated cartridge-carrier with its tension spring. Fig. 6, is a side elevation corresponding with Fig. 5, showing same parts with exception of the extractor, and addition of a lever for regulating the delivery of cartridges from the magazine. Fig. 7, is a perspective view of a key-block which rides upon the bolt and controls each movement thereof as well as that of the recharging and extracting mechanisms. Fig. 8, illustrates a plan and an end view of a tension spring shown in Figs. 5 and 6. Fig. 9, is a side view of handle of the device showing trigger-locking attachment, in an unlocked position. Fig. 10, is a horizontal section of the latter also in an unlocked position; Fig. 11, a detail perspective view of the magazine-controlling lever; Fig. 12, a longitudinal vertical section through end of gun and ferrule or cap. Figs. 13 and 14, are detail perspective views of adjacent edges of the case or cane and its ferrule, showing a roller-hinge joint between them; and Fig. 15, is a detail view in perspective of the bifurcated cartridge-carrier, detached.

Reference being had to the drawings and letters thereon A indicates the main forging or frame of the arm, being that single part most clearly shown in side elevation by Fig. 3, and in plan by Fig. 2 immediately above. Just above its longitudinal center this frame A is drilled throughout its length, the channel B thus formed being closed at one extremity by an end wall, or by a suitable plug, and open at its opposite or front end where it registers with the bore of a barrel C, which latter at this point is screwed to the frame A as shown by Fig. 4. Immediately below channel B said frame A is perforated by a second channel or magazine D, which enters from the rear, extends forward to the breech of

the arm, and is provided with a longitudinal slot *a* in its base; said magazine, like the channel B, being closed at its rear and open at its front end for purposes that will hereinafter appear.

At a point below the breech of the piece, an opening is milled out of the frame A constituting a mouth E through which cartridges are first introduced into the magazine D, while a continuation of mouth E of equal length and width passes up through the frame A and forms a chamber F in which the receiving end of a cartridge-carrier reciprocates. Back of the chamber F the side walls of the frame A are depressed or cut away as shown at G and H to facilitate the recharging operation, while between said depressions is a bridge I the function of which is to serve as a keeper for the breech-bolt, all as will later appear.

On both sides of frame A are formed a series of curved flanges or projections *b* affording a substantial support and bearing for said frame against the inside walls of its case, the metal between such flanges being removed to lighten the structure.

The frame A being formed substantially as described serves to support the firing, extracting, and re-charging mechanisms secured thereto, each of which will now be described in the order named.

Near the rear end and to one side of the frame A is fulcrumed a sear *c* the short arm thereof being provided with an angular barb or hook *d* which extends through the side of the frame A into the channel B, and is held normally in such position by the action of a leaf spring *e* upon the free end of said sear. Within a pocket formed by the extreme inner end of the channel B is located a spiral compression spring *f* which bears upon, and at times exerts its force against, a hammer J also located within the channel B. In the end of the hammer J adjacent to the spring *e* is formed an annular groove *g* which, when the piece is at half cock, is engaged by the barb *d* of the sear; and, upon inspection of Fig. 4, it will be observed that this end of the hammer has its periphery beveled inward at *h*, and is slightly undercut by the groove *g*. The object of this bevel is to avoid the possibility of the barb *d* accidentally engaging the groove *g* as the hammer flies past said barb from a full cocked position, while the advantage of the undercut form of the groove *g* is, that it may the more effectually retain the barb *d*, of similar shape, when engaged thereby. Beyond the groove *g* the hammer may be seen to assume its full diameter again which affords a liberal bearing for the same within the channel B and further lessens the possibility of the barb *d* accidentally engaging the groove *g* as it passes, owing to the brief space of time in which such engagement must take place if at all. At its opposite end the hammer is provided with an enlarged head K for impacting against the firing-pin, and about

midway between its extremes *h* and K, is formed an angular shoulder *i* which receives the barb *d* of the sear *c* when the parts are at full cock; that portion *j* between said shoulder *i* and the head K being reduced in diameter for a considerable distance, in order to allow ample time for the barb *d* to engage the shoulder *i* as the hammer is being drawn back against the action of the spring *f*.

Another element of the firing mechanism will be found in the breech-bolt L which is located within the channel B in advance of the hammer J, and like it is adapted to reciprocate therein. Running longitudinally through the bolt L is a firing-pin *k* sharpened somewhat upon its forward end *l*, and protruding slightly at its opposite end as at *m*; said pin being provided with a small elongated slot *n* into which projects a screw or pin from the breech-bolt thus limiting the movement of the pin with relation to the bolt. Obviously the position occupied by the pin *k* in the bolt L depends upon the character of the cartridge used, if a center fire cartridge is used, the pin *k* should pass through the longitudinal center of the bolt, if a rim fire then the pin should take an oblique course as shown in the present instance. At a point about midway between the two ends of the bolt L is located a key-block M, as illustrated in Fig. 7; this important factor of the invention is firmly attached to the upper side of said bolt, and serves not only as a means of cocking the arm; but directly controls the extracting and reloading mechanisms, in which latter connection its beveled shoes *o o* perform an important function, as will later appear. Forward of the key-block M the breech-bolt L is flattened on its sides as at *p* in order that it shall not interfere with parts of the re-charging mechanism.

The extracting mechanism as shown by Fig. 4, consists simply in a spring latch *q* secured to the breech-bolt L, and extending between and beyond the parallel guides *r* at the upper advance end of said bolt; and a flat similarly located downwardly curved projection *s* occupying a corresponding position below the breech-bolt L. Said parts adapted to engage the rim of the cartridge when fired and to be retracted by operation of the key-block M upon its bolt L, thus withdrawing the empty shell to a position where it comes in contact with ejector studs *y y* formed on the bifurcated cartridge-carrier shown by Fig. 15, whereupon the exploded shell is cast upward and out of the gun.

The re-charging mechanism of the invention consists in the magazine D, in which is located a coil spring *t* carrying at its front end a follower plug *u* which latter is adapted to bear upon the first of a line of cartridges as shown in Fig. 4, the foremost cartridge of the series being retained in the magazine until a predetermined time by action of a spring finger or dog N (Fig. 11) secured to one side of the frame A, as shown by Fig. 6. The finger N

at its free end is equipped with an angular latch *v* which penetrates the frame A and normally engages the rim of the foremost cartridge; while at a point about midway between its extremities the finger N is provided with a vertical latch-withdrawing lug *w* so placed that it will be operated upon by the key-block M through the intervention of a member of the reloading mechanism which will now be described.

O indicates a bifurcated one part recharging cartridge-carrier as shown by Fig. 15, the same being fulcrumed upon the sides of the frame A at *x x*, and converging at its forward end into a U shaped semi-cylindrical cartridge-receiver P. On this carrier, above and immediately back of the receiver P are formed the ejector studs *y y*, before referred to, while still farther back on the arms of said carrier O are duplicate lugs *a' a'* followed by inclines *b' b'*, straight tracks *c' c'*, and again inclines *d' d'*, said inclines *b'* and *d'* being on opposite sides of the fulcrums *x x*, and at intervals being traversed by shoes *o* on the under side of key-block M, for the purpose of elevating or depressing the receiver end (P) of the carrier.

On one side or bifurcation of the cartridge-carrier O is cut or otherwise formed a vertical cam surface *e'*, located and adapted to engage the lug *w* on the finger N each time the receiver P is lowered, thus releasing one cartridge from the magazine D and allowing it to enter the receiver P; while at its far or rear end, as at *f'*, same bifurcation is rounded on its outer surface for engagement with a tension spring Q. The tension spring Q (Fig. 8) is secured to the side of the frame A as shown by Fig. 6, and its inner surface presents a wave-like appearance formed by upper and lower depressions *g' h'*, in one of which the end *f'* of the carrier O rests at all times; while below the depression *h'* is a projecting tooth *i'* for limiting the downward movement of the lever.

The barrel C of the fire-arm which is screwed into the outer end of the frame A is quite ordinary in its construction, its only point of novelty residing in upper and lower inclined offsets or pockets *j' k'* in which the spring latch *q* and the projection *s* rest during the firing of a cartridge, as will be seen by reference to Fig. 4, and near its outer end said barrel is surrounded by an enlarged ring which serves as a bearing for this end of the barrel within its case.

The case, which entirely incloses the parts above described, is preferably cane-like in appearance, as shown by Fig. 1, and is constructed in four separable parts, a stationary body portion R, a reciprocating body portion S, a handle T, and a cap or ferrule U. The stationary body portion R of the case or cane incloses the barrel C of the arm, and at its extreme inner end is firmly secured to the frame A; while the opposite end of this portion of the case is slit with its edges *l'* turned

in, as clearly shown by Fig. 13, to serve as one member of a hinge joint between the parts R and U. The reciprocating body portion S normally abuts against the part last described and directly incloses the entire frame A, together with its operating mechanisms. At *m'* the body S is broken by a rectangular transverse opening into which the key-block M secured to the breech-bolt L projects forming a close joint and extending up flush with the surface of the case. This being the only connection between the body S and the operating mechanisms, and the one connection which causes them each to act and co-act, as will hereinafter be set forth. At a convenient position on the side of the body S is located a trigger consisting simply of a small stud V projecting through and slightly out of the case, the same being secured to a light leaf spring within, and adapted under proper conditions to engage the free end of the sear *c* for firing a charge. Still back of the trigger V the body S is again opened by an elongated slot, through which projects a screw for engaging a safety-stop *o'* which is automatically inserted under the free end of the sear *c* by each breech movement of the gun, and must be withdrawn by the hand of an operator before the arm can be discharged. This safety-stop *o'* is clearly shown by Figs. 9, and 10, and by reference to the former it will be seen to have an angular rear face *p'* which is operated upon by a cam located in the handle T as will now appear.

The handle T may be formed as shown by Fig. 1, and provided with a hinged lid *q'* for closing the end of a receptacle for cleaning wads, &c., while the other angle *r'* of said handle extends a short distance into the body S wherein it takes a bearing and is adapted to be rotated slightly with relation to said body S and frame A contained therein. At a point in the circumference of the handle T adjacent to the stop *o'*, said handle is mutilated or cut away in angular form to produce a cam edge *s'*; which, when said handle is rotated to the left, engages the stop *o'* as shown by Fig. 9, and forces it forward beneath the sear *c*. This handle T bears a comparatively flat extension W which occupies a position between the case S and the rear portion of the frame A; being let into a depression *t'* in the surface of said frame, and serving to couple the parts together in a firm and satisfactory manner. At *u'* the extension W is reduced somewhat in width, and is there arranged to engage on the one side a lug *v'*, and on the opposite side an abutment X for limiting rotation of the handle in each direction; the abutment X performing also the additional function of resting against the end of the handle T during a discharge of the gun thereby taking the concussion. While the handle itself is held in such position by a screw extending therefrom into a transverse slot *w'* formed in the under surface of the body S of the cane, thus permitting the necessary rotation of the handle

when required. Said slot having an enlargement at its end for admission of the screw head and being encompassed by a springsplitting z retained in position by a button thereon resting in the enlargement of the slot.

At the extreme opposite end of the cane is located the cap or ferrule U, which has formed thereon a projecting tongue x' crossing which transversely is a rounded pintle y' with extending ends as shown by Fig. 14; when in position this ferrule bears a relation to the body R as illustrated by Fig. 12, with its tongue x' resting flush with the surface of the cane and between the parallel upturned edges l' , the pintle y' being immediately back thereof. Within the outer end of the body portion R and the inner end of the ferrule U is a hollow sleeve Y of a circumference practically corresponding to that of the parts last mentioned, with the exception however, that the forward portion of said sleeve Y is slightly flattened on its under side as at z' , so as to clear the upturned edges l' as the sleeve is advanced to the position shown by Fig. 12. At the rear end of the sleeve Y are secured light parallel side rods a'' a'' which are accommodated by seats or bearings b'' in the flanges b and frame A, wherever they come in contact with such parts, and extending rearwardly these rods a'' a'' terminate at the handle T, being rigidly attached to a ring c'' encircling the reduced part r' of the handle. The ring c'' is provided with elongated openings d'' diametrically opposite each other through which screws are passed into the part r' of the handle T thus providing for a partial rotation of the handle irrespective of the side rods a'' .

The invention being constructed substantially as shown and described its use and operation are as follows: The initial or breech movement of the piece is effected by a slight turn to the left and a direct pull on the handle T serving to separate the body portions R and S, exposing to view the mouth E at entrance of the magazine, and at same time throwing the safety stop o' —by contact of the cam edge s' on the handle T—beneath the free end of the sear c' thus locking the latter against accidental discharge. Such movement also serves to displace the cap or ferrule U by withdrawing therefrom the sleeve Y, through the medium of the side rods a'' a'' attached to and moving with the handle T. This having been accomplished the ferrule U falls, for want of a support, into the position shown by dotted lines in Fig. 12, swinging upon its pintle y' the projection x' extending slightly above. Through the mouth E thus opened cartridges may then be introduced into the channel or magazine D, being fed thereto against the action of the spring f until a sufficient number are so placed with their slugs foremost as shown by Fig. 4, the advance cartridge of such series serving as a keeper for the rest and itself, being retained in position by the engagement with its rim of the latch v on the finger N. The magazine

having thus been charged a forward movement of the handle T advances the sleeve Y, at the opposite end of the cane; and the lower slightly flattened forward end z' thereof coming in contact with the upstanding projection x' on the ferrule U turns the same upon its pintle y' thus elevating said ferrule to a position approximating that of the bottom of the body R at its front end. The object of this movement being to prevent vibration of the ferrule U which might otherwise destroy the aim of a marksman; though the same object may be attained by simply removing the ferrule from the case before the arm is put into use. By the forward movement of the handle T as stated, the reciprocating body S of the case is advanced, taking with it the key-block M which in turn advances its breech-bolt L, until the front rounded under sides o o of said block are brought into contact with the inclines b' b' on opposite sides of the bifurcated cartridge carrier O, whereby said carrier is depressed to its lowermost position, the receiver P at the end thereof descending into the magazine mouth E. Simultaneously with this movement the cam surface e' on one side of the carrier O engages the lug w on the finger N to force said finger outward thus disengaging its latch v and releasing one cartridge which is immediately thrust forward into the receiver P. During this movement of the cartridge carrier O its curved rear extremity f' is traveling from the depression h' to that marked g' in the tension spring Q which latter tends to retain said lever either in an elevated or a depressed position. If now a breech-movement of the arm be repeated, a withdrawal of the handle T together with the reciprocating body of the cane S, carries with them the key-block M, which during its backward movement retracts the breech-bolt L and through it acts in a similar manner upon the hammer J until the latter reaches a position in the channel B where its shoulder i is engaged and retained by the barb d on the sear c , the spring f in the meantime being compressed to its full extent. Continuing in its backward movement the key-block M next comes in contact with the inclines d' d' on the carrier O, which are promptly depressed causing the receiver P at the opposite end of said carrier to rise into alignment with the bore of the barrel C bringing with it the cartridge contained therein. By a repetition of the forward or breech closing movement heretofore described, the bolt L is thrust forward by the block M to the position shown by Fig. 4, and its advance end passing through the receiver P drives the cartridge before it into the bore of the barrel C, the latch g engaging the upper rim of the cartridge, and the projection s resting beneath; while at the same time said receiver is automatically lowered and an unexploded cartridge projected therein from the magazine D as aforesaid. A cartridge being now in the barrel, the breech being closed, and the hammer at full cock the

piece is about in condition for firing; but first the handle T must be rotated to its original position, which movement serves to lock the parts R and S with relation to each other, and interpose the abutment X between the handle T and the body of the frame A. All being now ready for firing, the safety stop *o'* is retracted by the hand of the operator, and the firing bolt released by a touch of the trigger

V. A shot having thus been delivered the operation above described is repeated, the breech-bolt L each time it is retracted, bringing with it the empty shell of an exploded cartridge securely held between the projecting extractor-latch *q* above and the lip *s* below, until finally said shell comes in contact with the ejector studs *y y* on the carrier O at the instant the receiver P begins its ascent, which latter then co-operates with the studs *y* to throw the shell over the shoulder of the user. This operation may be repeated as long as there are cartridges in the magazine to be fired; or if more rapid firing is desired the gun may be caused to repeat as rapidly as a breech-movement can be made, without the necessity of rotating the handle T with each shot and without the use of safety stop *o'*, the operator simply holding a finger on the trigger V continuously and reciprocating the body of the cane S, backward and forward until the cartridges have been exhausted.

This being a description in its preferred form of my improved fire-arm, its use, and operation, it will be observed that many minor changes of construction may be made and substituted for parts herein shown and described without in the least departing from the spirit of my invention, which having been thus set forth,

What I claim is—

1. In a repeating fire-arm the combination with a barrel and firing mechanism, of a cartridge carrier provided with a receiving chamber, a tension spring having upper and lower depressions in its lateral side for acting upon the carrier, and means for automatically elevating and depressing said chamber, substantially as described.

2. In a repeating fire-arm the combination with a barrel and firing mechanism, of a cartridge carrier provided with a receiving chamber, a tension spring having upper and lower depressions in its lateral side for acting upon the side of said carrier and a projecting tooth at the lower edge of said spring for limiting the downward movement thereof, together with means for elevating and depressing said carrier and its chamber, substantially as described.

3. In a repeating fire-arm the combination with a barrel and firing mechanism employing a breech-bolt, of a cartridge carrier provided with a receiving chamber, an incline upon said carrier back of its fulcrum, and a key-block upon the upper surface of the breech-bolt having its depending sides in op-

erative engagement with said incline, substantially as described.

4. In a repeating fire-arm the combination with a barrel and firing mechanism employing a breech-bolt, of a cartridge carrier, an incline on said carrier back of its fulcrum, and a key-block detachably secured to the breech-bolt provided with beveled shoes on its depending sides which periodically engage the inclines on the said carrier, said key-block uniting the breech-bolt with the reciprocating body portion, substantially as described.

5. In a repeating fire-arm the combination with a barrel and firing mechanism having a breech-bolt, of a cartridge-carrier terminating in a receiving chamber and provided with inclines on both sides of its fulcrum, and a key-block upon the breech-bolt adapted to engage each of said inclines for periodically elevating and depressing the receiving chamber, substantially as described.

6. In a repeating fire-arm the combination with a barrel and firing mechanism employing a breech bolt, of a recharging mechanism consisting of a magazine, a latch for retarding delivery of cartridges from the magazine, a cartridge carrier provided with inclines on both sides of its fulcrum, a key-block upon the breech-bolt adapted to engage each of said inclines, and a cam face on the lever for periodically withdrawing said latch, substantially as described.

7. In a repeating fire-arm the combination with a barrel and firing mechanism employing a breech-bolt, of a recharging mechanism consisting of a magazine containing a spring pressed plunger, a latch for retarding delivery of cartridges from the magazine, a bifurcated cartridge carrier provided with inclines on both sides of its fulcrum, a key-block upon the breech-bolt adapted to engage each of said inclines for alternately elevating and depressing the carrier, and a cam face on the carrier for periodically withdrawing said latch, substantially as described.

8. In a repeating fire-arm the combination with a barrel and firing mechanism employing a breech-bolt, of a recharging mechanism consisting of a magazine, a spring latch for retarding delivery of cartridges from the magazine, a lug located upon the latch, a cartridge carrier bearing a receiving chamber, and provided with inclines on both sides of its fulcrum, a key-block upon the breech-bolt adapted to engage each of said inclines, and a cam face on the lever for periodically engaging said lug, and withdrawing the latch, substantially as described.

9. In a fire-arm the combination of a reciprocating breech-bolt, a firing pin located therein, a sear, and a spring actuated reciprocating hammer interposed between said bolt and sear having shoulders for engagement of the sear when at full and half cock respectively, said hammer having an annular beveled sur-

face forwardly inclined at the half-cocked position and an annular undercut beneath said bevel, substantially as described.

10. In a repeating cane gun the combination
5 with a barrel and firing mechanism employing a breech-bolt, of a cartridge carrier provided with inclines on both sides of its fulcrum, a key-block upon the breech-bolt adapted to engage each of said inclines for periodically elevating or depressing the carrier, and
10 a sectional case inclosing same consisting of a stationary body, a reciprocating portion a rotatable handle, and means for locking the body portions of the case with relation to each
15 other, by rotation of said handle, substantially as described.

11. In a repeating cane gun the combination with a barrel and firing mechanism employing a breech-bolt, of a cartridge carrier provided with inclines on both sides of its fulcrum, a key-block upon the breech-bolt adapted to engage said inclines alternately, and a sectional case inclosing same consisting of a stationary body, a reciprocating portion provided with a trigger bearing upon a sear, a
25 rotatable handle and means for locking the body portions of the case with relation to each other and the firing mechanism against accidental discharge by rotation of said handle,
30 substantially as described.

12. In a repeating cane gun the combination with a barrel and firing mechanism employing a breech-bolt, of a cartridge carrier provided with inclines on both sides of its fulcrum, a key-block upon the breech-bolt engaging said inclines alternately, and a sectional case inclosing same consisting of a stationary body, a reciprocating portion bearing a trigger and also a safety stop, and a rotatable
35 handle provided with a cam for acting upon said safety stop to project it beneath the trigger, substantially as described.

13. In a repeating cane-gun the combination with a frame to which is attached a firing, extracting, and recharging mechanism, a sectional case for inclosing said frame consisting of a stationary body, a reciprocating body,
45 and a rotatable handle having a disconnected

extension projecting between said frame and reciprocating body adapted to engage an abutment on the frame for the purpose of locking the parts against a breech movement, substantially as described. 50

14. A case for a cane-gun consisting of a body portion, a ferrule, a reciprocating sleeve projecting from the body and supporting the ferrule, and means for withdrawing said sleeve-support from the ferrule, substantially as described. 55

15. A case for a cane-gun consisting of a body portion, provided with one member of a hinge connection, a detachable ferrule provided with a corresponding member of a hinge connection, and a ferrule-supporting-sleeve adapted to be automatically withdrawn from the ferrule, substantially as described. 60

16. A case for a cane-gun consisting of a body portion and a ferrule connected by a detachable hinge connection, a ferrule-supporting-sleeve between the body and ferrule provided with a flattened under surface for clearing said hinge, and means for withdrawing the support from the ferrule, substantially as described. 65

17. A case for a cane-gun consisting of a body portion, a handle, a ferrule, a reciprocating sleeve projecting from the body and supporting the ferrule, and side rods connecting said sleeve and handle for withdrawing the support from the ferrule, substantially as described. 70

18. A case for a cane gun consisting of a body portion having a slit at its outer end the edges of which are upturned, a ferrule having a projecting tongue crossed by a pin-tle resting behind said upturned edges, a supporting sleeve between said body and ferrule provided with a flattened under surface, and a rod for withdrawing the support from the ferrule, substantially as described. 75

In testimony whereof I subscribe my signature in presence of two witnesses. 80

ERNEST E. DYBALL.

Witnesses:

W. W. HOLE,
M. L. HOLE.