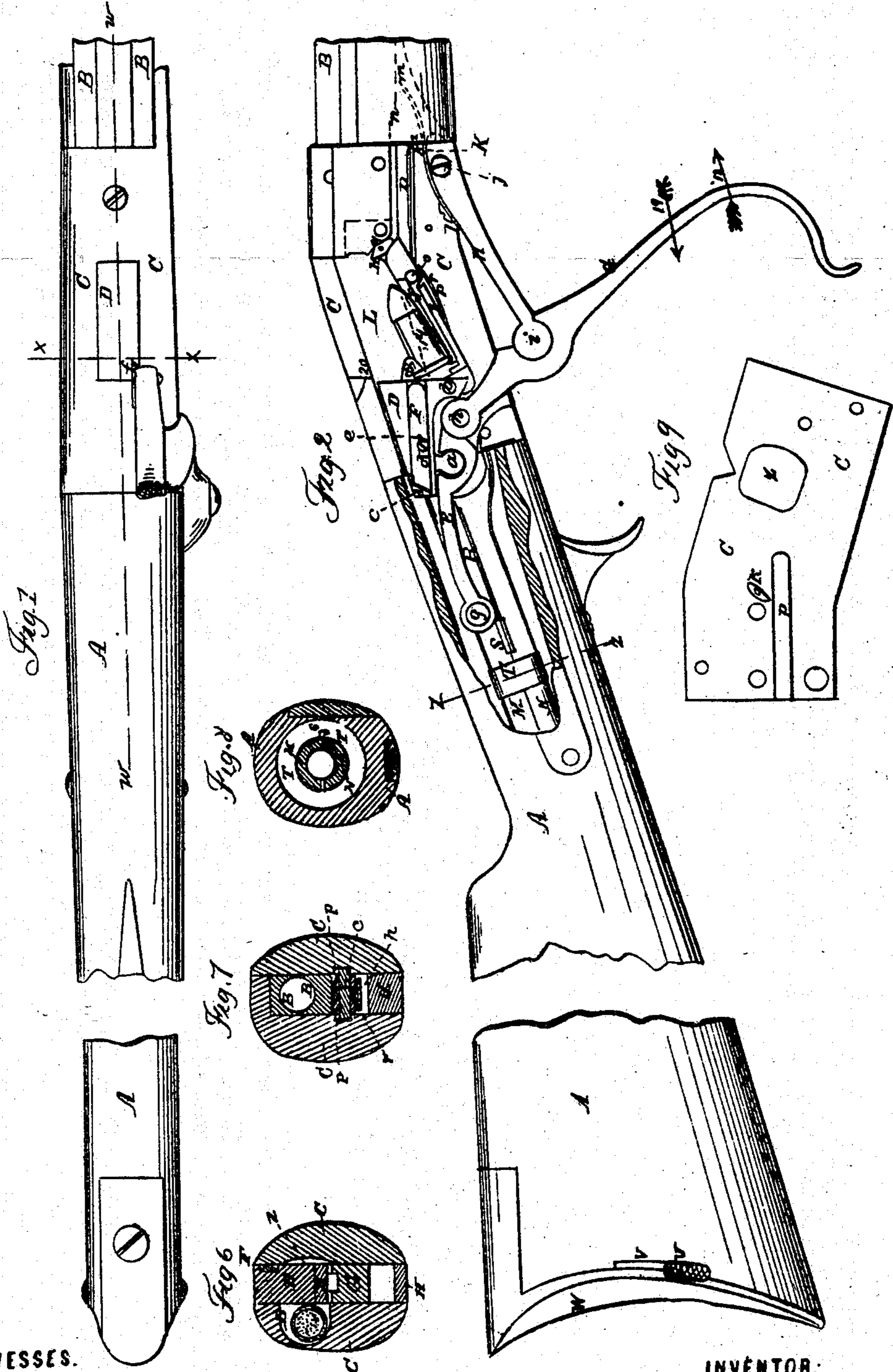


V. FOGERTY.  
Magazine Fire-Arm.

No. 59,126.

Patented Oct. 23, 1866.



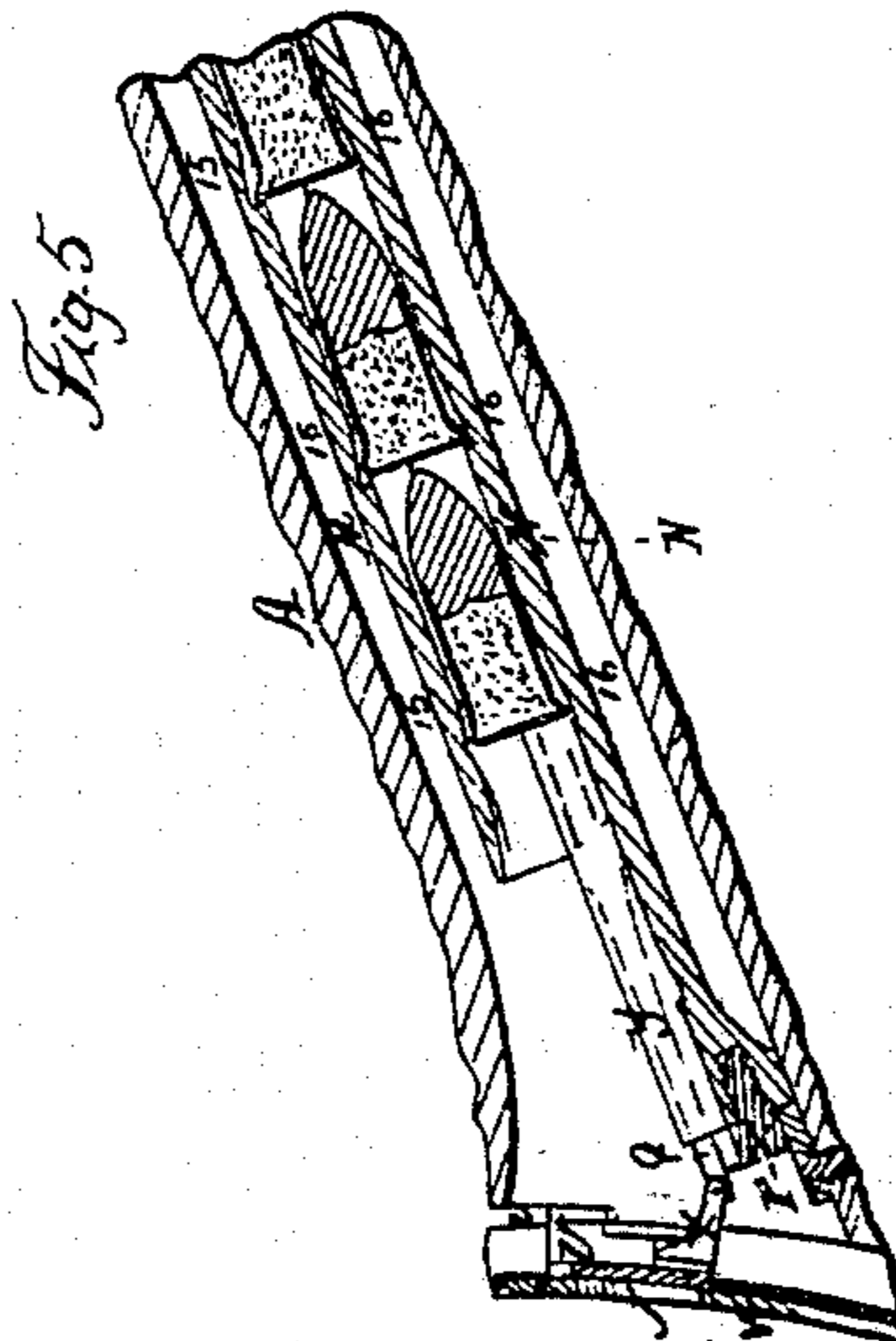
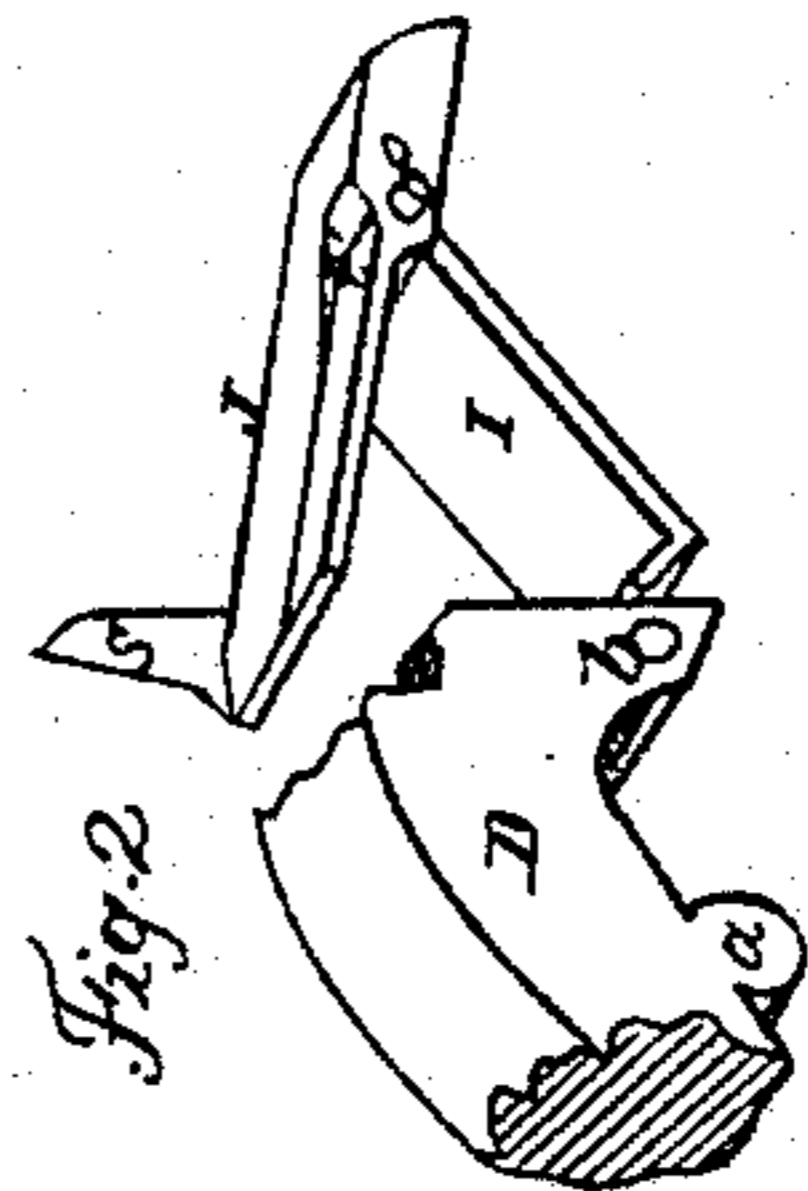
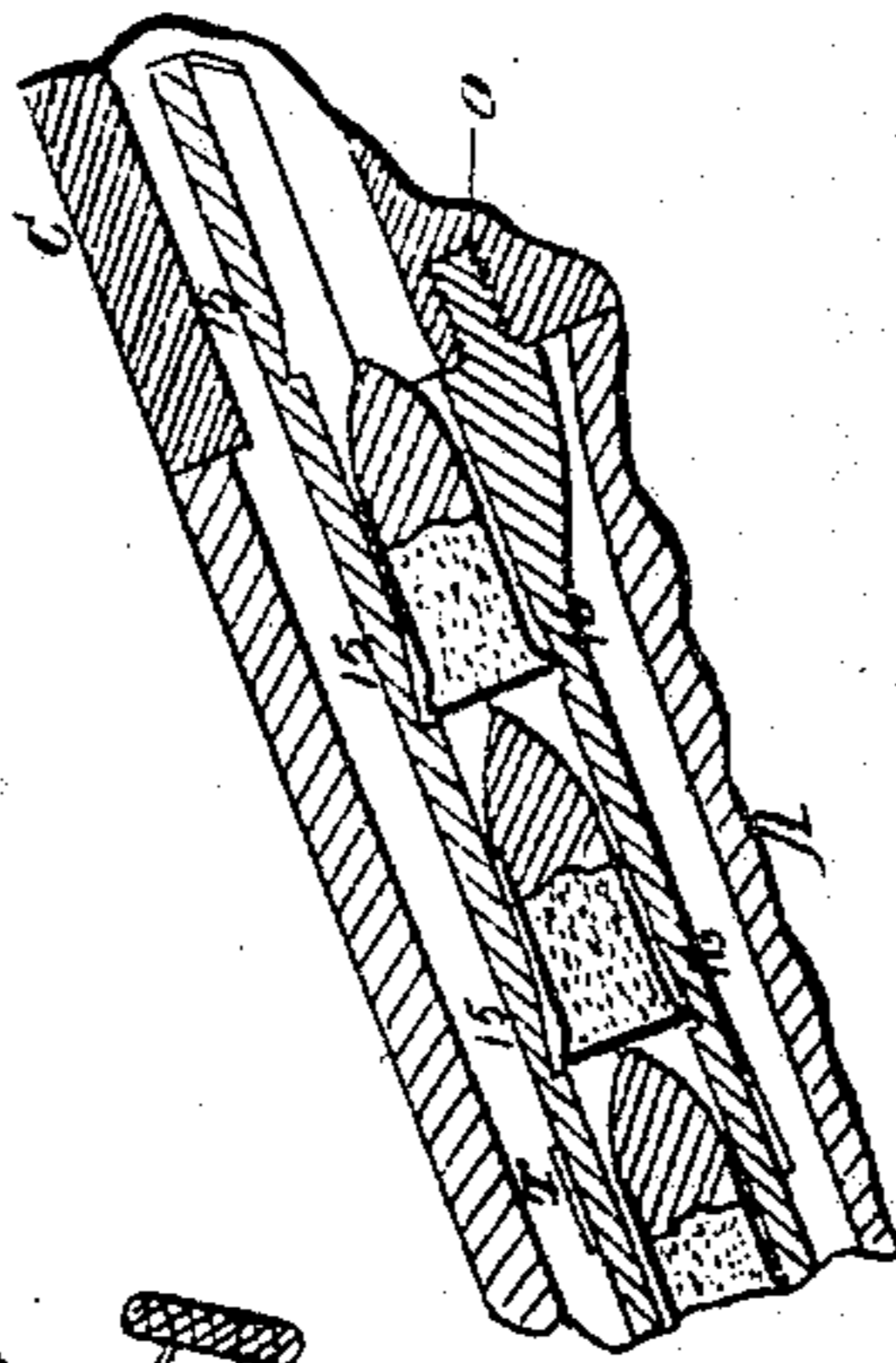
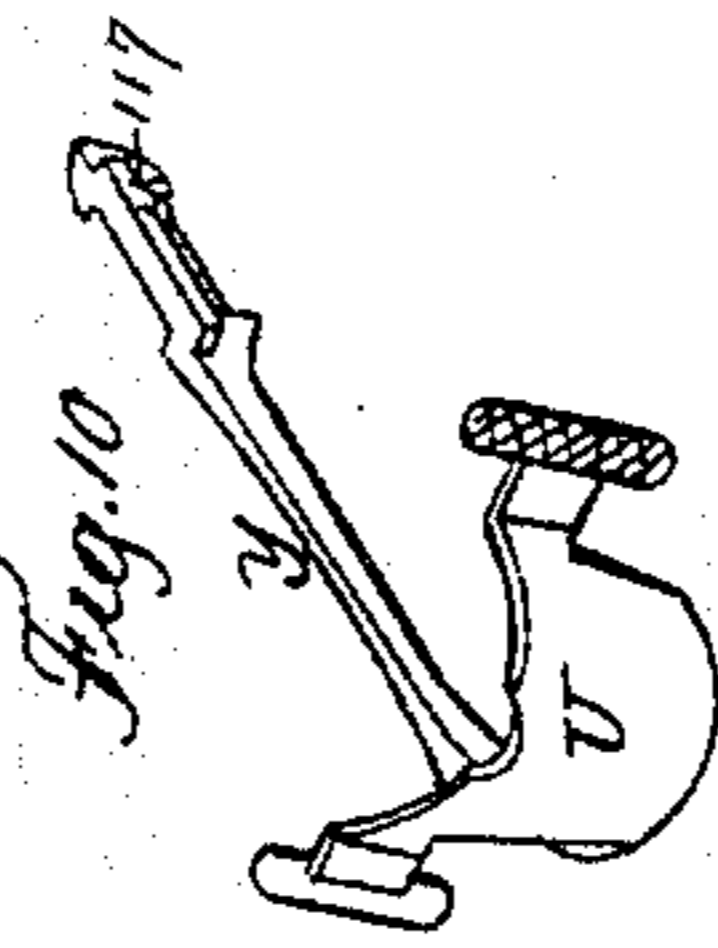
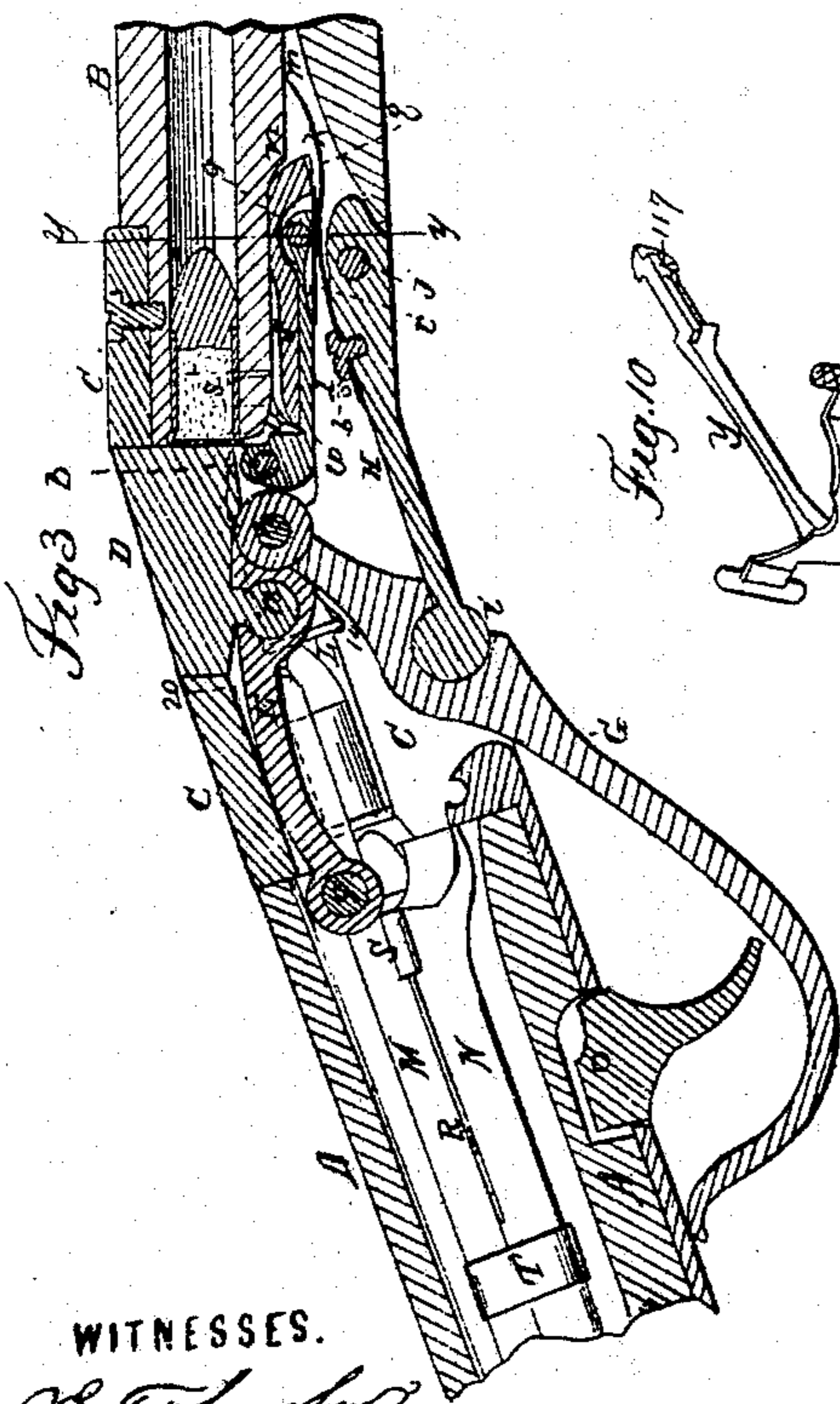
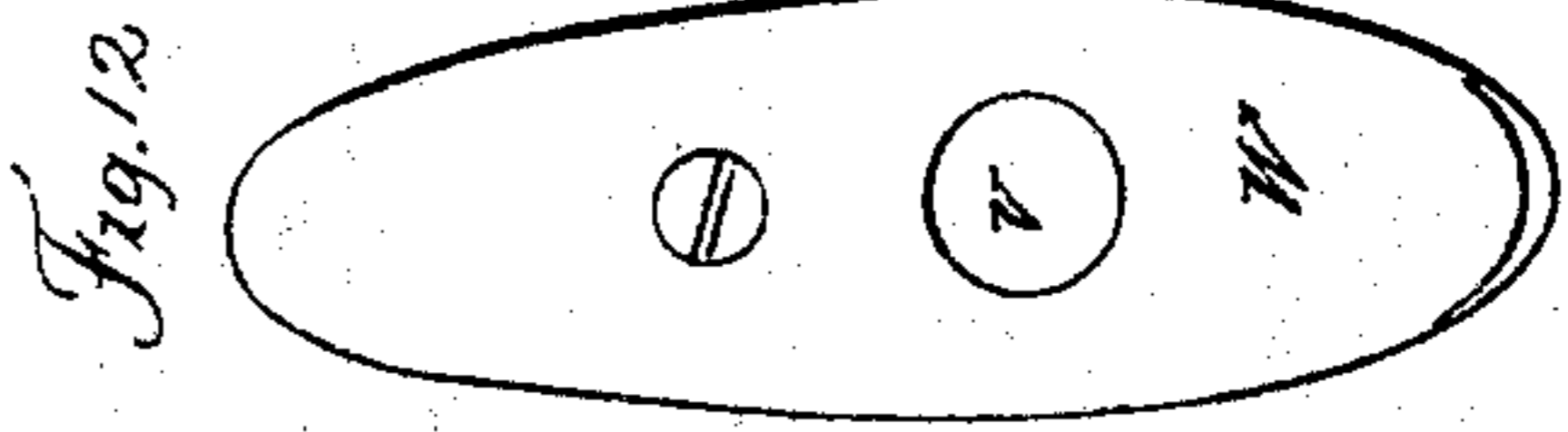
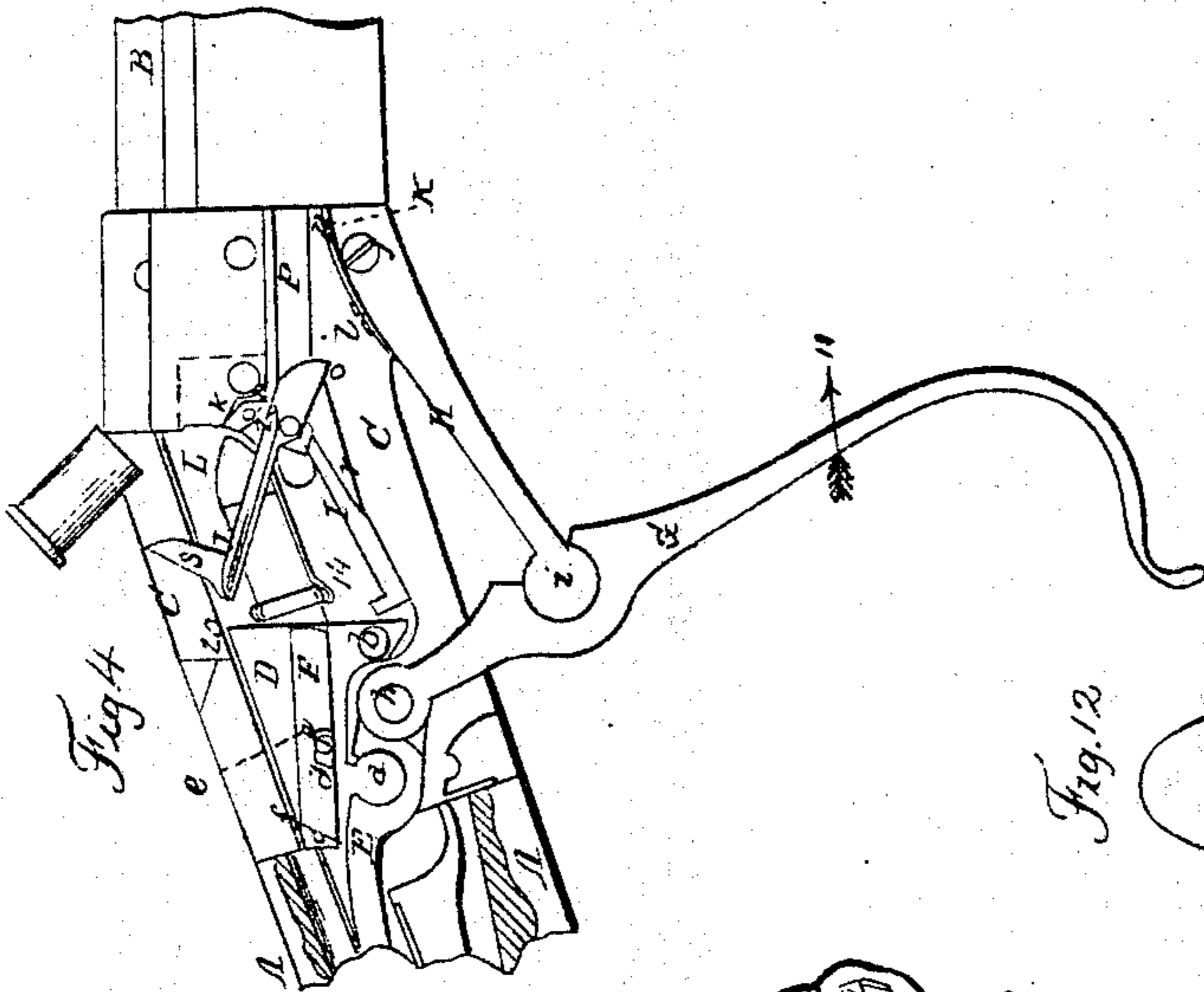
WITNESSES.  
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INVENTOR:  
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WITNESSES.  
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# UNITED STATES PATENT OFFICE.

VALENTINE FOGERTY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF  
AND PAUL P. TODD, OF SAME PLACE.

## IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. 59,426, dated October 23, 1866.

*To all whom it may concern:*

Be it known that I, VALENTINE FOGERTY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Fire-Arms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of a gun with my improvements applied thereto. Fig. 2 is a side elevation of the same, the lock and a portion of the breech and stock being removed to show the position of the parts when the guard-lever is thrown down. Fig. 3 is a section on the line *w w* of Fig. 1. Fig. 4 represents the cartridge guide or ejector with the parts immediately connected therewith in the position which they occupy when throwing out the empty shell or cartridge. Fig. 5 is a vertical section through the portion of the stock containing the magazine which feeds the cartridges forward. Fig. 6 is a section on the line *x x* of Fig. 1. Fig. 7 is a section on the line *y y* of Fig. 3. Fig. 8 is a section on the line *z z* of Fig. 2. Fig. 9 is an elevation of the interior of one side of the breech. Fig. 10 is a view of the plate which closes the lower end of the magazine. Fig. 11 is a perspective view of the cartridge guide or ejector. Fig. 12 is an elevation of the butt-end of the stock.

My invention relates to that class of breech-loading fire-arms provided with a magazine from which a supply of metallic cartridges is fed into the barrel, and the empty cases discharged therefrom by the movements of the breech-pin operated by the guard-lever.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is the stock, which is connected with the barrel B by a metallic breech, C, which is cut away to receive the breech-pin D, and mechanism for operating the same. The breech-pin D is jointed at *a* to an arm or connecting-rod, E, to allow it to swing freely thereon. To the lower front end of the breech-pin D is pivoted at *b* the device which guides the cartridge into the barrel and withdraws and ejects the empty shell, a complete

description of which device will be given hereinafter. The front side of the breech-pin D is grooved out, as seen at *c*, Figs. 2 and 4, for the reception of the percussion-bolt F, which is provided with an open slot, *d*, the sides of which come in contact with the head of the screw-pin *e*, thus determining the distance which it moves within the groove *c* in the side of the breech-pin D. The rear of the front side of the breech-pin D is cut away at *f* to allow the hammer to strike the percussion-bolt F.

The rear end of the connecting-rod E is connected to a stud, *g*, projecting from the side of the upper portion of the magazine for a purpose which will be set forth hereinafter. The front end of the connecting-rod E is hinged at *h* to the upper extremity of the guard-lever G, to which is jointed, at *i*, the rear end of an arm or lever, H, which is pivoted near its forward end, at *j*, to the breech C.

On each side of the forward extremity of the lever H are formed projections, (not shown in the drawings,) which, in connection with the spring *k*, secured to the lever H, prevent it and the breech-pin being thrown down too far.

The spring *k* is secured at one end, *l*, to the upper side of the arm or lever H, while its opposite end, *m*, bears against the under side of the barrel B, which is cut away from the point *n* to its rear or breech end to allow of the passage of the device for guiding the cartridge and withdrawing and ejecting the empty shell, which will now be described. The lower portion of the said device consists of a plate, I, the forward end of which is connected to an upper plate, J, by a pin, *o*, the ends of which project into grooves P formed in the interior of the breech C. (See Figs. 2, 4, 7, and 9.) The under side of the front of the plate J is cut away at *q*, Fig. 3, to allow of the play of the spring *r*, one end of which is secured to the bottom of the plate I, its opposite end pressing against the under side, *q*, of the plate J, and keeping it down upon the plate I, as seen in Fig. 3, in a position to be moved under the barrel B, and when withdrawn therefrom striking a dog or tumbler, K, which is pivoted to the side of the breech C, Fig. 9, and lies in a recess, *u*, at the rear end of the barrel, thus



tipping up the plate J, as seen in Fig. 4, and ejecting the empty shell.

*s* is a finger or projection rising from one side of the rear end of the upper plate, J, and forms the retractor for withdrawing the empty shell or cartridge, the upper side of the plate J, opposite the retractor *s*, being cut out, forming a shoulder, *t*, for a purpose presently to be explained.

One side of the breech C, outside of the line of the barrel B, is bored to form a recess, L, for the reception of the cartridges as they are fed forward from the magazine, the flange of the forward cartridge resting in a notch, 14, in the bottom of the recess L.

The magazine is formed in two parts, M N, the lower piece, N, being connected at its forward end to the breech C by the screw O, while its rear end is secured in place by the screw P passing into the metal plate Q, fastened to the butt-end of the stock A. (See Fig. 5.)

The upper edge of the portion M of the magazine is provided at each end with a longitudinal ledge or projection, R, over which fits a hook, S, secured to the lower edge of the portion M, the ledges R and hooks S allowing the upper portion, M, to slide upon the lower portion, N, of the magazine and serving as hinges and guides to keep the upper portion, M, in place. The interior of the upper portion, M, of the magazine is provided with notches 15, and the interior of the lower portion, N, is provided with corresponding notches 16.

T is a spring fitted around the magazine for the purpose of keeping the portion M closed upon the portion N until opened by the flanges of the cartridges pressing it up as they are moved forward when the guard-lever is operated.

U is a plate, of the form shown in Fig. 10, for opening and closing the lower end of the magazine, the stock being cut away at *v*, Figs. 2 and 5, to allow it to be moved by the operator up and down to open and close the hole V in the butt-plate W.

To a projection, X, Fig. 5, formed on the plate U is pivoted one end of an arm or lever, Y, Figs. 5 and 10, the outer end of which is provided with a square projection, 17, which fits into an aperture of corresponding size formed in the upper edge of the lower portion, N, of the magazine, so that when the plate U is raised to enter a cartridge the projection 17 on the forward end of the arm Y pries or presses up the portion M of the magazine against the resistance of the spring T.

In the side of the breech C is formed a cavity, Z, Fig. 9, into which the flange of the cartridge rolls as it slides down the incline of the plate J, whereby it is permitted to pass into its place behind the retractor *s*, as seen in Fig. 2.

The mechanism of the lock and remaining portion of the gun being of common construction require no description here.

**Operation:** When the magazine is required to be charged with cartridges, the breech C is closed and the plate U is pressed upward by the hand of the operator, so as to open the hole V in the butt-plate W, the end of the arm or lever Y at the same time prying up the portion M of the magazine, which is thereby opened sufficiently far to allow of the entrance of the cartridges, the flanges of which rest in the notches 16, and the straight portions of the interior of the upper part, M, of the magazine are constantly pressed by the spring T down upon the shells of the cartridges, which, on closing the hole V, are securely held in place ready to be fed forward. The guard-lever G is now thrown down in the direction of the arrow 18, Fig. 2, carrying with it the breech-pin D, which first swings on the stud *g* as a center, and rocks freely downward on the joint *a* of the connecting-rod E until the depression of the guard-lever liberates the rear of the breech-pin from the edge 20 of the breech C, when it is rocked in the opposite direction while being drawn back in a line parallel with the center of the magazine, bringing with it the plates I J, in which position the cartridge, lying in the recess L of the breech C at one side of the line of the barrel is free to roll in the following manner onto the plate J, as seen in Fig. 2:

When the breech is closed the flange of the forward cartridge rests in the notch 14 in the recess L, and on the breech-pin being drawn back the cartridge rolls off the inclined surface of the recess L, and the flange of the cartridge, leaving the notch 14, slides onto the incline of the plate J and enters the cavity Z in the opposite side of the breech C, whereby the flange of the cartridge is allowed to pass behind the retractor *s*, as seen in Fig. 2.

As the breech-pin is drawn back the upper part, M, of the magazine slides back on the lower part, N, the inclined portion of each notch 15 coming against and riding over the flange of the cartridge, and raising the upper part, M, of the magazine until the notch 15 drops over the flange of the cartridge next behind it, which is held stationary in the lower part, N, of the magazine by its flange resting in the notch 16, when the upper part, M, closes on the lower part, N.

The parts now being in the position represented in Fig. 2, and the guard-lever G being brought up in the direction of the arrow 19, Fig. 2, the breech-pin D, with the plates I J, through the connections already explained, are moved forward, the rounded surface of the plate J striking against the dog or tumbler K and rear end of the barrel B, by which the plate J is tipped up into a position for delivering the cartridge in line with the center of the barrel, where it is pressed home by the continued forward movement of the breech-pin D, which, after having passed in front of the point 20, rises and securely closes the breech, and the plates I J being guided forward by



the pin *o* and grooves *P* into the recess under the barrel, and the retractor *s* enters its recess. (Seen dotted in Fig. 3.)

Simultaneously with the forward movement of the breech-pin *D* the upper part, *M*, of the magazine is brought forward, causing the notches *15* to strike against the flanges of the cartridges, feeding them forward, the flange of the cartridge in front being deposited into the notch *14* of the recess *L* at one side of the barrel.

On drawing back the hammer the parts are in their firing position, and, the trigger being pulled, the hammer is released and thrown forward against the percussion-bolt *F*, which is driven against the flange of the cartridge, thus discharging the piece. The guard-lever *G* is again thrown down in the direction of the arrow *18*, as before explained, carrying back with it the breech-pin *D* and plates *I J*, the retractor *s* withdrawing the empty shell from the barrel and depositing it upon the plate *J*, which, on the shoulder *t* coming in contact with the dog or tumbler *K*, is tipped up against the resistance of the spring *r*, thus ejecting the empty shell, as seen in Fig. 4.

After the shell is ejected the plate *J* is returned by the spring *r* to its normal position, and the forward cartridge in the recess *L* of the magazine is kept therein, with its flange in the notch *14*, until the retractor *s* passes behind the notch *14*, when the cartridge is free to roll down, as before, onto the plate *J* into the position for being pressed into the barrel.

By my improvements, the cartridges, after being inserted, are first grasped and held by the jaws of the magazine and fed along through the same until they successively reach the chamber formed on the side of the gun in the rear of the barrel, when the forward cartridge comes into position to be delivered to the barrel by the movement of the breech-pin previously thrown back to receive it.

In breech-loading guns heretofore invented it has been impossible to feed the cartridge by positive motions without greatly increasing the size of the stock of the gun, as they have generally been constructed with a removable tube occupying the middle of the stock, into which the cartridges were inserted and fed along by means of the force of a spring. Thus, it being necessary to place the feeding mechanism in the middle of the breech in order to convey the cartridge to the barrel, no positive

feeding devices could be employed without the objection above named.

In my improved gun it will be seen that by the arrangement of such mechanical devices as will convey the cartridges through a magazine arranged and operated on the side of the stock, and then deliver them to the breech-pin, or in front of the center of the barrel, I am enabled to perform all the necessary operations by positive movements, and without increasing the size of the gun-stock.

Again, it is very important in magazine-guns to guard against accidental explosion and the choking of the receiver, which is very liable to occur in breech-loaders, because the cartridges necessarily rest upon and come in contact with each other, so that any sudden jar or displacement of the cartridges would cause either a premature discharge or an obstruction of the feeding mechanism.

By the construction and arrangement of my improved magazine each cartridge is placed and held independently of the others, so that they cannot come in contact, and are fed along in these relative positions to the barrel.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the magazine-tube, arranged along the side of the gun-stock, as described, with the mechanism for delivering the forward cartridge to the breech-pin or to the end of the barrel, substantially as herein shown and set forth.

2. Making the magazine-tube in two jaws laterally hinged to each other, so as to permit the easy insertion of the cartridge into the feeding apparatus, and also allow the head of the cartridge to pass through the smallest part of the feeding-magazine, as described.

3. The combination and arrangement of the breech-pin *D*, guard-lever *G*, arm or lever *H*, and connecting-rod *E*, to give the required movements to the breech-pin and magazine, as described.

4. The plate *V*, for opening and closing the lower end of the magazine, in combination with the lever *Y*, for pressing open the sliding portion of the magazine, substantially as set forth.

VALENTINE FOGERTY.

Witnesses:

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N. W. STEARNS.