(No Model.) 4 Sheets—Sheet 1.

J. M. & M. S. BROWNING.

BREECH LOADING FIREARM.

No. 486,273. Patented Nov. 15, 1892.

Fig. 1

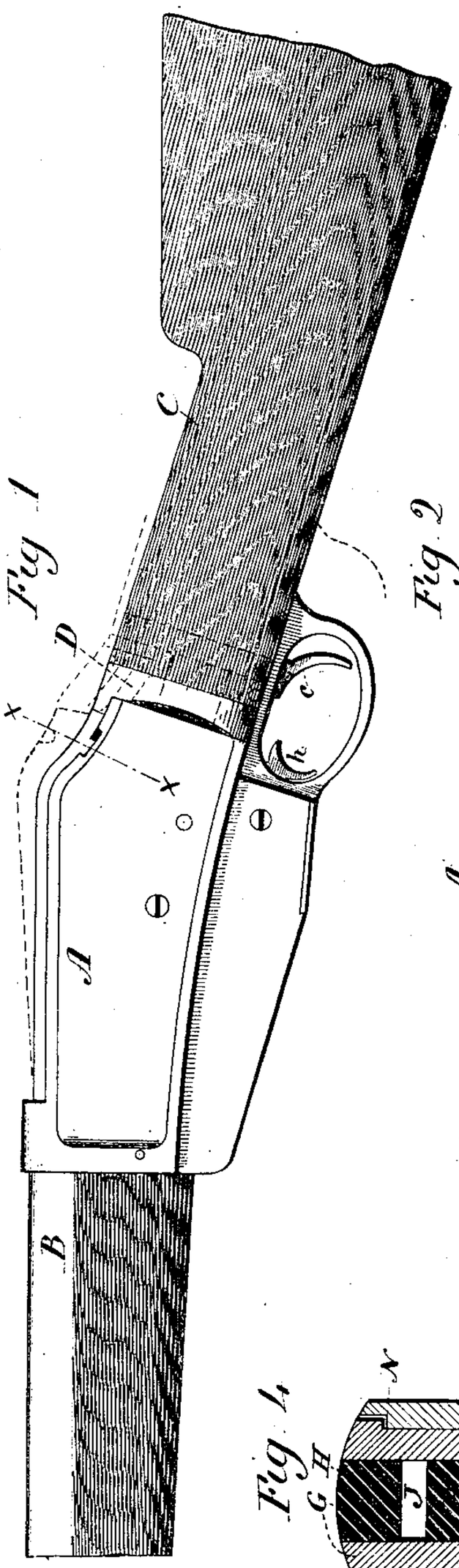


Fig. 2

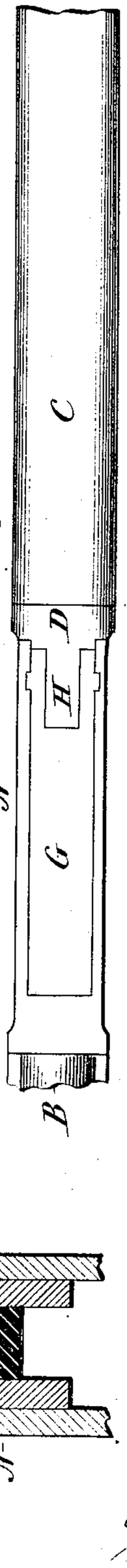


Fig. 3

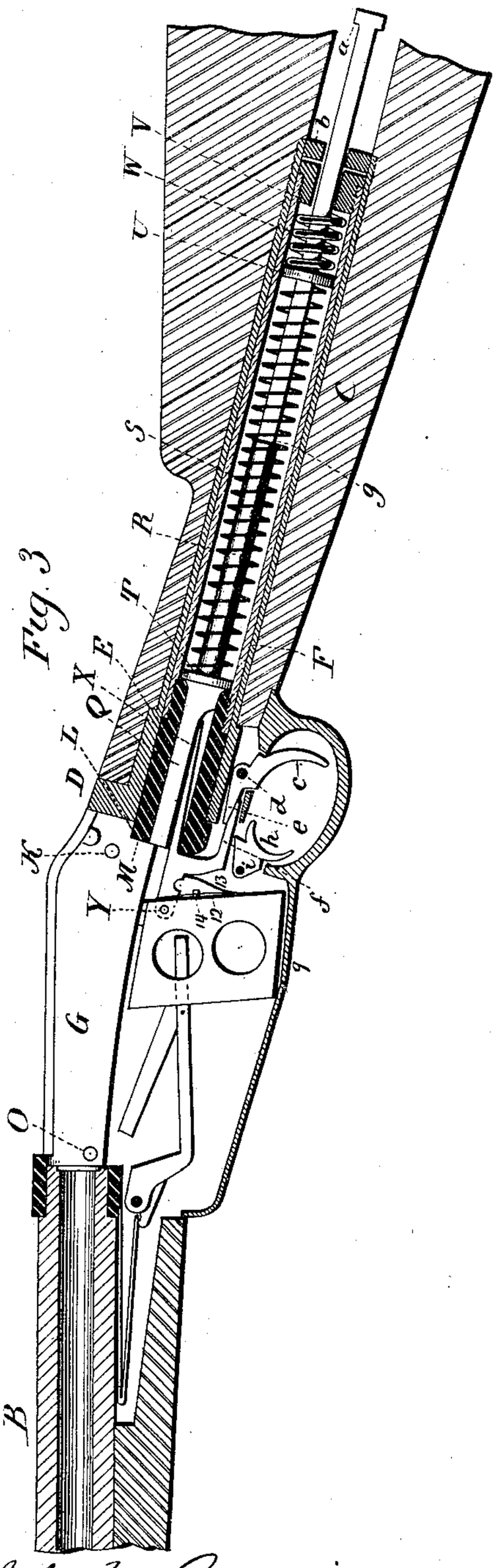
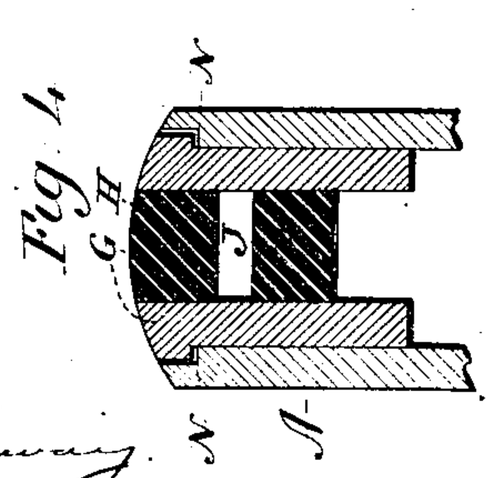


Fig. 4.



Witnesses.
J. H. Shumway.
Lillian D. Kelsey.

John M. Browning.
and Matthew S. Browning.
By their Attys
Church & Seymour

(No Model.) 4 Sheets—Sheet 2.

J. M. & M. S. BROWNING.

BREECH LOADING FIREARM.

No. 486,273. Patented Nov. 15, 1892.

Fig. 5

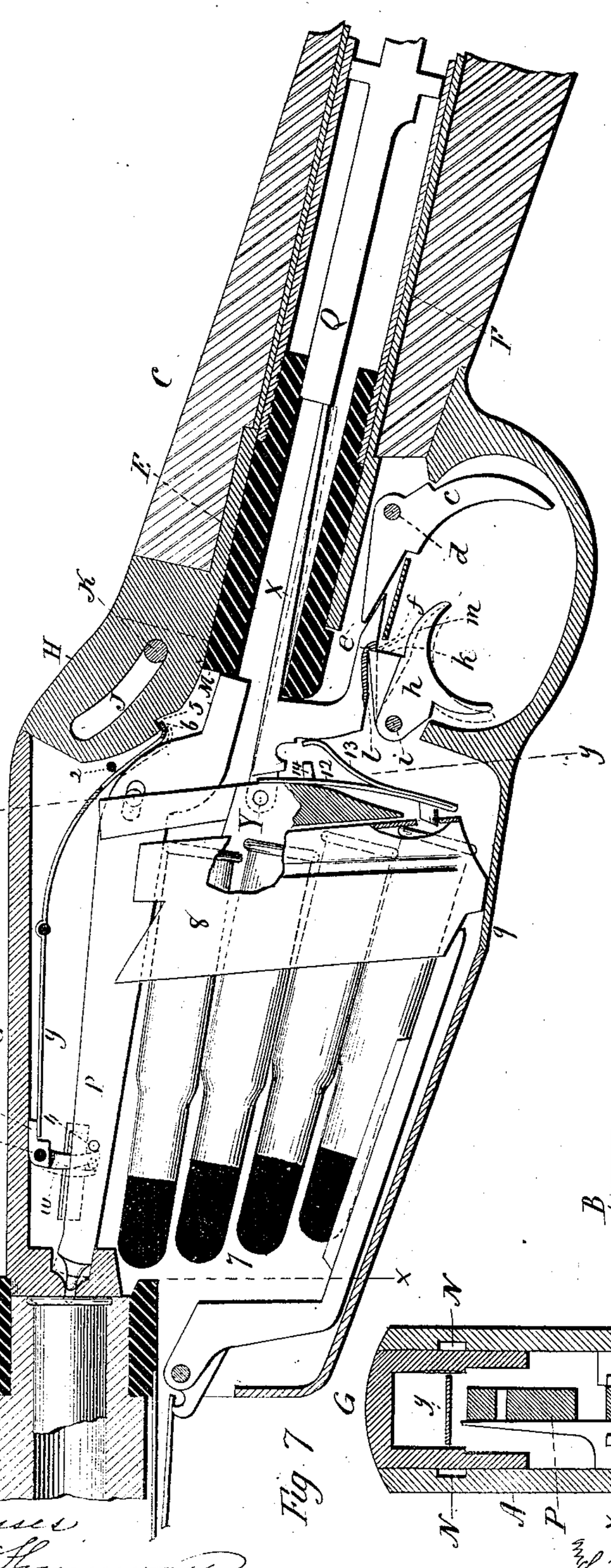


Fig. 6

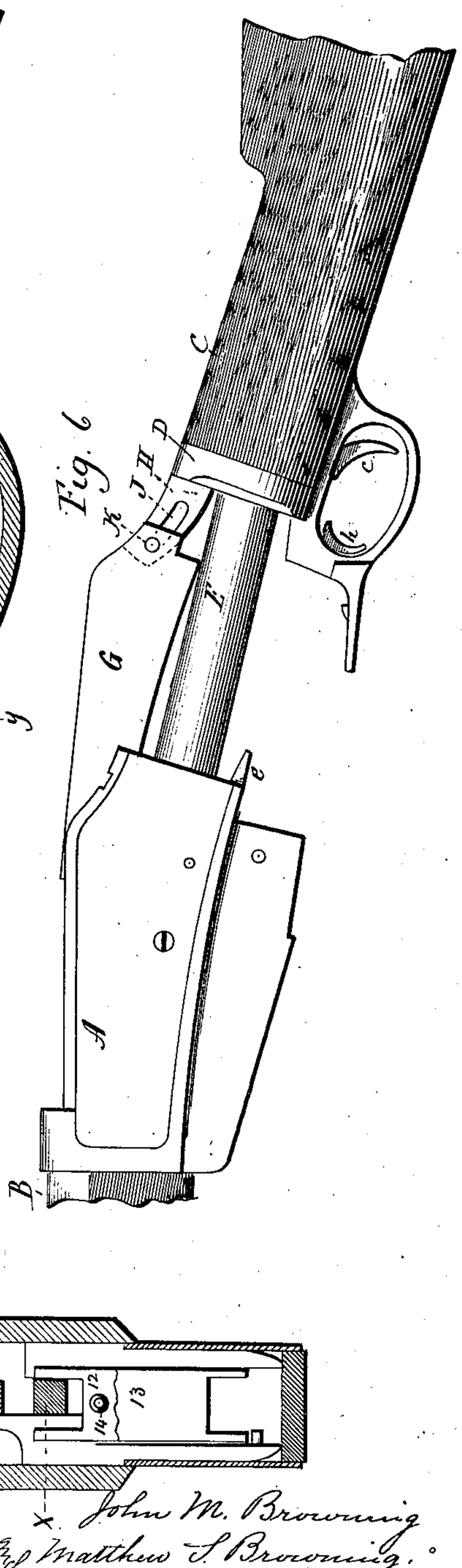
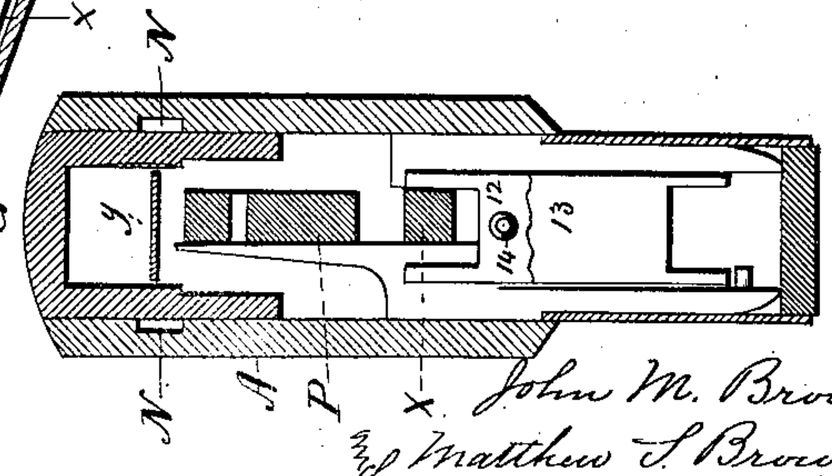


Fig. 7



Witnesses
J. F. Shumway
Lillian D. Kelsey

John M. Browning
and Matthew S. Browning.
Inventors.
By Earl Seymour
Atty.

(No Model.) 4 Sheets—Sheet 3.

J. M. & M. S. BROWNING.

BREECH LOADING FIREARM.

No. 486,273. Patented Nov. 15, 1892.

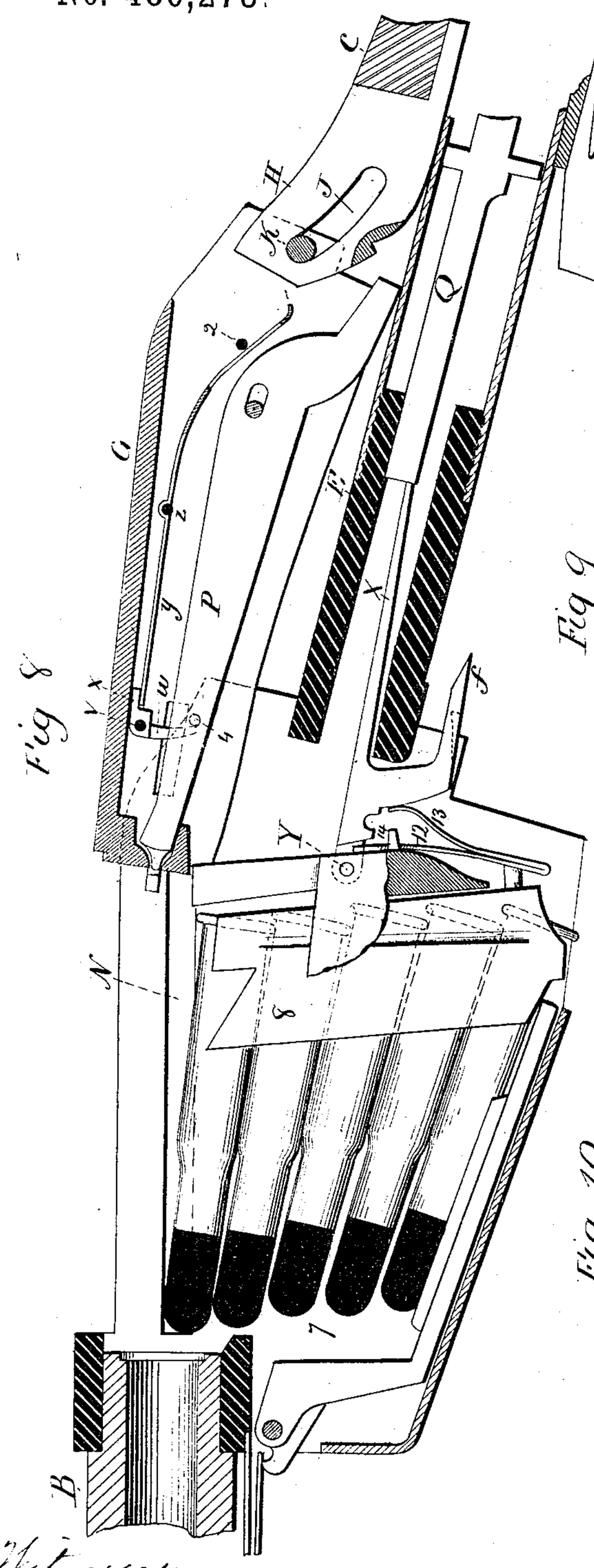


Fig 8

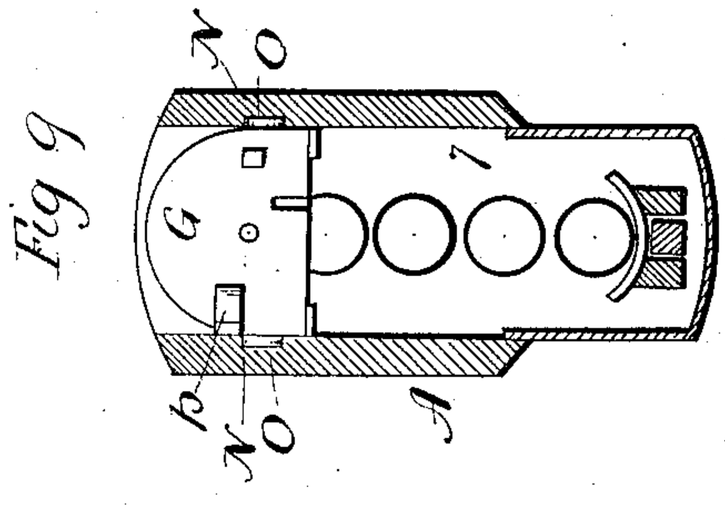


Fig 9

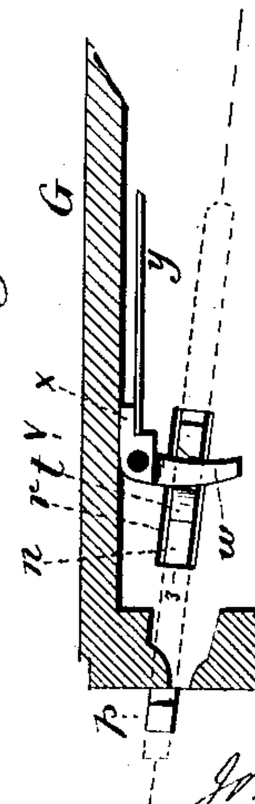


Fig. 10

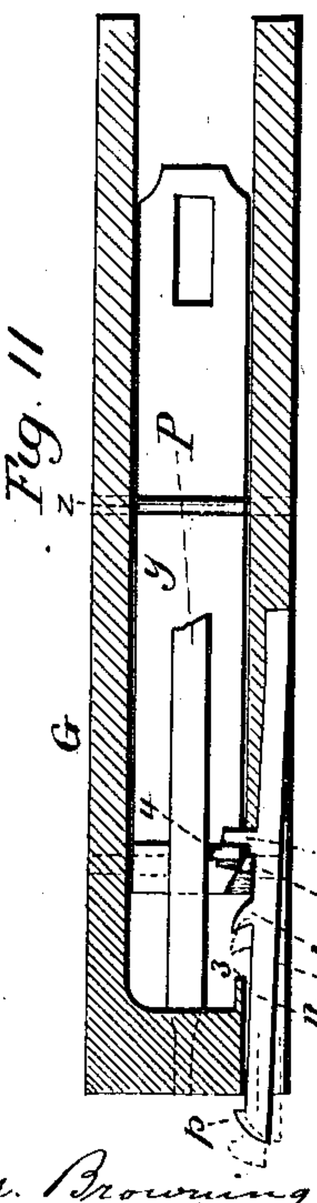


Fig. 11

Witnesses
J. N. Shumway
Lillian D. Kelley

John M. Browning
Matthew S. Browning
Inventors
By their Attys
Dodge & Seymour

(No Model.) 4 Sheets—Sheet 4.

J. M. & M. S. BROWNING.

BREECH LOADING FIREARM.

No. 486,273. Patented Nov. 15, 1892.

Fig. 12

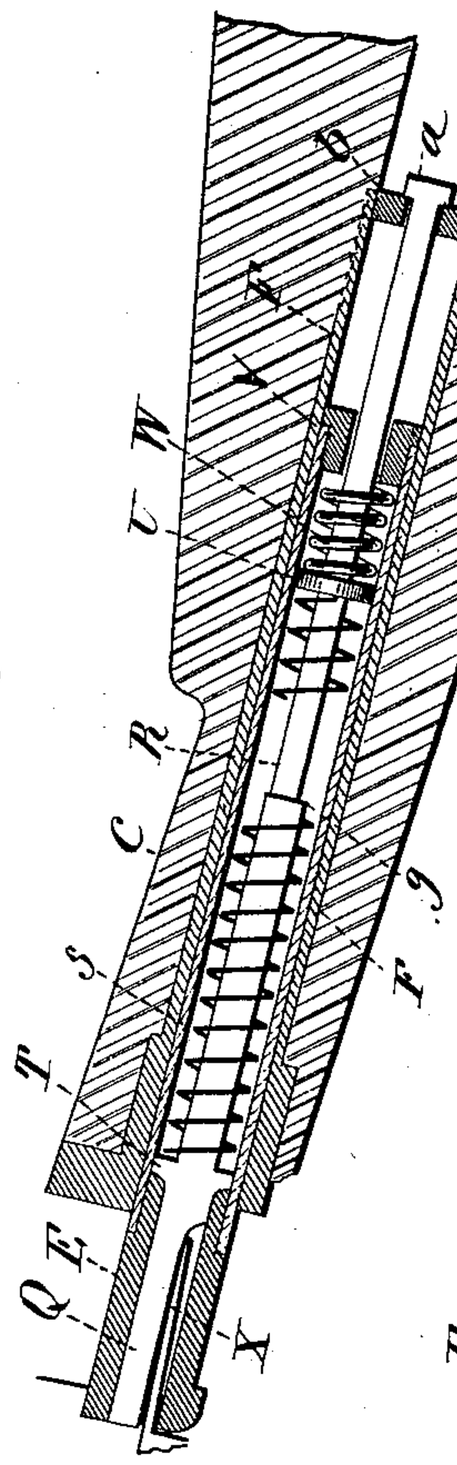


Fig. 13

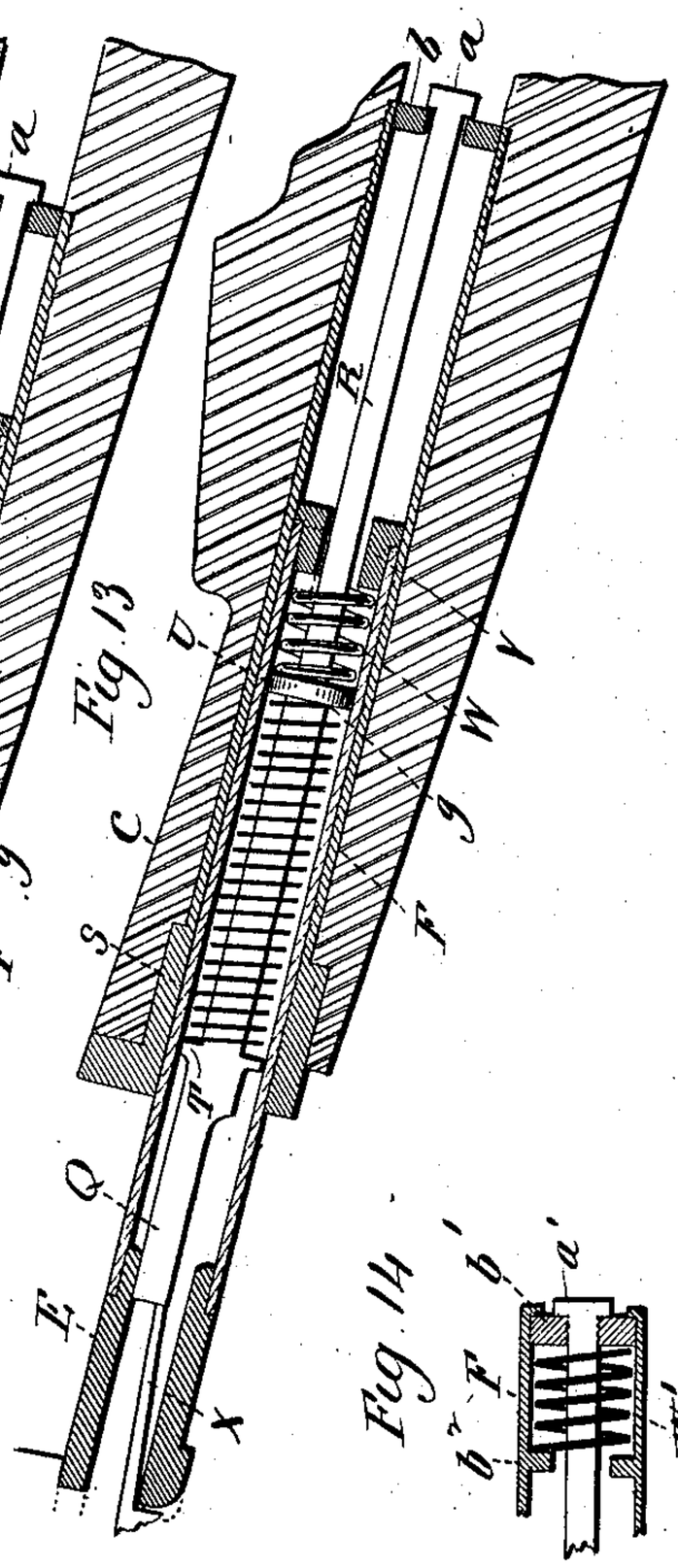
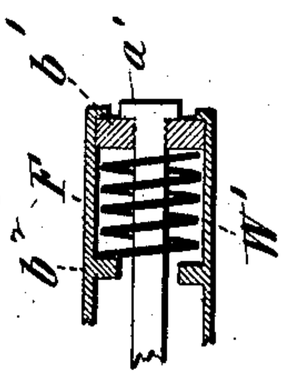


Fig. 14



Witnesses.
J. H. Shumway.
Lillian D. Kelsey.

John M. & Matthew S. Browning.
Inventors.
By Allys.
Earle Seymour

UNITED STATES PATENT OFFICE.

JOHN M. BROWNING AND MATTHEW S. BROWNING, OF OGDEN, UTAH TERRITORY, ASSIGNORS TO THE WINCHESTER REPEATING ARMS COMPANY, OF NEW HAVEN, CONNECTICUT.

BREECH-LOADING FIREARM.

SPECIFICATION forming part of Letters Patent No. 486,273, dated November 15, 1892.

Application filed June 27, 1892. Serial No. 438,105. (No model.)

To all whom it may concern:

Be it known that we, JOHN M. BROWNING and MATTHEW S. BROWNING, of Ogden, in the county of Weber and Territory of Utah, have invented a new Improvement in Firearms; and we do hereby declare the following, when taken in connection with accompanying drawings and the letters and figures 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 side view of the arm complete; Fig. 2, a top view of the same; Fig. 3, a longitudinal sectional side view of the arm complete, all the parts in the closed or normal position; Fig. 4, a transverse section cutting on line *x x* of Fig. 1; Fig. 5, a longitudinal central section showing the mechanism of the arm in the closed position and with the removable magazine and cartridges in place, the hammer at full-cock; Fig. 6, a side view of the arm complete, showing the receiver and stock portions separated, so as to bring the breech-piece into the open position; Fig. 7, a transverse section on line *y y* looking forward; Fig. 8, the same as Fig. 5, showing the parts in the open position and as having just received a charged magazine preparatory to the closing movement; Fig. 9, a transverse section on line *x x* of Fig. 5 looking rearward and showing front end view of the breech-piece; Fig. 10, a longitudinal vertical central section cutting through the forward part of the breech-piece to illustrate the operation of the extractor; Fig. 11, a horizontal longitudinal section cutting on line *x x* of Fig. 10; Fig. 12, a longitudinal section cutting through the spindle and guide in the stock, showing the parts in the position when the head on the tail of the hammer comes to a bearing on the guide; Fig. 13, the same, showing the parts in the extreme advanced position when the hammer has reached its full-cocked position; Fig. 14, a modification in the arrangement of the cushioning-spring.

This invention relates to an improvement in that class of firearms in which the breech is opened by a forward sliding movement of the barrel, and particularly to magazine-arms in which the receiver is constructed with a chamber or recess below the breech-piece, adapted to receive a removable magazine or cartridge-holder carrying several cartridges, the receiver being adapted for the introduction of the holder with its cartridges through the top when the breech-piece is open, and so that after the cartridges have been discharged from the holder the holder may be forced down through an opening in the bottom of the receiver by the introduction of the next holder, parts of the invention being applicable to single breech-loaders; and the invention consists in the construction as hereinafter described, and particularly recited in the claims.

A represents the receiver, to the forward end of which the barrel B is attached in the usual manner and so as to open into the receiver at the rear. The receiver is detached from the stock and so that the receiver with the barrel which it carries may be drawn forward from the position seen in Fig. 1 to that seen in Fig. 6 or from that seen in Fig. 5 to that seen in Fig. 8, the two latter figures representing the parts enlarged from Figs. 1 and 6. The forward end of the stock C is provided with a plate D, against which the rear end of the receiver A abuts when the receiver is in the rear position, as seen in Figs. 1 and 2. The receiver is constructed with a spindle E, projecting from its rear end and downwardly inclined according to the downward inclination of the stock. This spindle is made tubular, and within the stock is a tube F, opening through the plate D at the forward end and corresponding to the spindle E, and so that the spindle E may slide longitudinally therein as a guide for the forward and backward movement of the receiver and barrel, and as from the position seen in Fig. 3 to that seen in Fig. 6 or from that seen in Fig. 5 to that seen in Fig. 8.

G represents the breech-piece, which is arranged longitudinally in the receiver and so as to be free longitudinally; but the breech-piece G stands between the two sides of the receiver and so as to allow the receiver to move forward and back to take the barrel away from the forward end of the breech-

piece. From the plate D is an upward and forwardly projecting arm H, which is constructed with an upward and forwardly inclined slot J. (See Fig. 5.) The rear end of the breech-piece is slotted corresponding to the arm H, and into which slot the arm H extends when the parts are in the closed position, as seen in Fig. 2, and through the breech-piece and through the slot J in the arm H is a pin K, which forms a connection between the breech-piece and the arm H, so that the slot limits the forward and backward movement of the breech-piece. In the normal or closed position of the parts the pin K stands at the lower end of the slot J, as seen in Fig. 5, and so that a forward movement imparted to the breech-piece will cause the pin K to ride forward and upward in the slot J and so as to raise the rear end of the breech-piece as it is thus moved forward, and as indicated in broken lines, Fig. 1. The breech-piece is also shown in this relation to the slot in Fig. 8.

In the receiver below the breech-piece a shoulder L is formed, (see Fig. 3, there represented as at the forward end of the spindle,) and the breech-piece is constructed with a corresponding shoulder M, so that when the breech-piece is in the closed position, as seen in Fig. 3, the shoulder M of the breech-piece abuts against the shoulder L on the receiver and so that the breech-piece is locked in its closed position, so as to resist recoil.

The barrel is provided with any suitable handle by which it may be moved forward and backward or it may be simply grasped by the left hand while the stock is held against the shoulder. The stock being held and the barrel moved forward, the receiver, spindle, and breech-piece will all move together, because the shoulder L of the receiver engages the shoulder M of the breech-piece; but in the forward movement of the breech-piece its rear end will rise because of the movement of the pin K in the slot J, as before described, and so as to cause the shoulder M of the breech-piece to rise above the shoulder L of the receiver by the time the pin K has reached the upper end of the slot in the arm H and so that the breech-piece being there arrested the shoulder L of the receiver may pass forward under the breech-piece, leaving the breech-piece stationary with the stock and with its rear end in the raised position, the rear end of the breech-piece resting upon the upper side of the spindle, as seen in Figs. 6 and 8. When the barrel is returned, the breech-piece still remains with its rear end in the up position and rides upon the upper side of the spindle until the receiver is returned so far as to take the shoulder L to the rear of the shoulder M of the breech-piece. Then as the barrel or forward end of the receiver strikes the forward end of the breech-piece the completion of the closing movement will force the breech-piece rearward, and its rear end will be drawn down because of the inclination of the slot J until the shoulder M of the breech-piece has passed down forward of the shoulder L of the receiver in the fully-closed position of the breech-piece and so as to lock the breech piece in that closed position against recoil. The breech-piece fits closely between the sides of the receiver and upon the arm H, so that the connection between the breech-piece, the stock, and the receiver supports the receiver and stock against any tendency to turn laterally upon the spindle as an axis.

To support the breech-piece at its forward end and maintain it in its proper relation to the barrel, the receiver is constructed with a longitudinal groove N (see Figs. 8 and 9) upon its inside, and the breech-piece is constructed near its forward end with corresponding trunnions O, (see Figs. 6 and 9,) which are adapted to run in grooves N, so as to guide the forward end of the breech-piece in a longitudinal line and yet permit the vertical swinging movement of the breech-piece, which is required as the receiver is drawn forward and as before described. Within the breech-piece the firing-pin P is arranged extending from the forward end of the breech-piece through to the rear end, as seen in Figs. 5 and 7.

Q represents the hammer, arranged in the tubular spindle E. The tail R of the hammer (see Fig. 3) extends rearward through the end of the spindle and through the end of the tube F, and within the spindle a spiral spring S is arranged around the tail of the hammer, adapted to bear forward against a shoulder T on the hammer, the rear end of the spring resting upon a collar U, loose on the tail of the hammer, and between the collar U and the end V of the spindle a short heavy spiral spring W is introduced, for the purpose to be hereinafter explained.

As the hammer is forced rearward the spring S will be compressed in order that the reaction of the spring may force the hammer forward. The nose of the hammer stands in such position with relation to the firing-pin that when the parts are in the closed position, as seen in Fig. 3, the hammer may strike the rear end of the firing-pin, as usual in the arrangement of hammers in other arms. The hammer being supported in the spindle would naturally move backward and forward with it, and this condition is taken advantage of as a means for cocking the hammer, and this is accomplished by means of the sear X, hung upon a pivot Y near the end of the receiver and below the hammer, as seen in Fig. 3. The sear is provided with a spring, as hereinafter described, the tendency of which is to force the nose or rear end of the sear upward against the hammer. The rear end of the tail of the hammer is provided with a head *a* of larger diameter than the opening through the end *b* of the tube F, through which the tail of the hammer passes, and the length of the tail of the hammer is such that the head *a* will strike the end *b* of the tube F

before the receiver shall have reached its extreme forward position, and as represented in Fig. 12, thereby arresting the forward movement or advance of the hammer with the receiver, and so that when the hammer is so arrested the receiver will continue its forward movement and compress the hammer-spring, as seen in Fig. 13, until the sear X may swing up under the action of its spring to a position forward of the hammer or a shoulder thereon, as seen in Fig. 13. Then when the receiver returns, as in the closing movement, the sear being engaged with the hammer, as seen in Fig. 13, holds the hammer in the cocked position while the closing movement of the breech-piece is completed and until the engagement of the sear with the hammer shall be released. The trigger *c* is hung upon a pivot *d* in the frame and in rear of the sear, so that the nose *e* of the trigger will extend over a finger *f*, projecting rearwardly from the sear, and so that a pull upon the trigger will depress the sear, as indicated in broken lines, Fig. 5, to release the hammer, so that it may be thrown forward under the reaction of its spring and so that the hammer will strike the rear end of the firing-pin to communicate the blow of the hammer to the cartridge.

The tail R of the hammer is constructed with a shoulder *g* forward of the front face of the collar U, which is loose on the tail R, and so that the front face of the collar may abut against that shoulder. The distance between the front face of the collar U and the shoulder *g* on the tail R of the hammer corresponds to the extent of compression required for the mainspring in the cocking of the hammer. Hence when in the forward movement of the receiver from the stock the head *a* of the tail of the hammer comes against the end *b* of the tube F in the stock, as seen in Fig. 12, the further forward movement of the spindle is arrested, as before described. Then as the tubular spindle E advances with the receiver its closed rear end V, acting through the spring W, which is stronger than the mainspring S of the collar U, forces the collar U forward, compressing the mainspring on the tail of the hammer until the collar U reaches the shoulder *g* on the tail of the hammer, as seen in Fig. 13, and this engagement between the collar U and the shoulder *g* occurs when the sear is advanced so far beyond the end of the hammer that it may spring up and engage the hammer, as seen in Fig. 13, this being substantially the completion of the forward movement of the receiver from the stock. It will be seen that were no provision to the contrary made the collar U would come against the shoulder *g* with a blow which would produce a considerable shock and might be objectionable in rapid working of the arm.

To overcome the sudden arrest of the forward movement of the receiver, a cushion is provided between the stock and the receiver, and this cushion, as here represented, is the stronger spring W, which is arranged between the closed end V of the tubular spindle E and the collar U, as seen in Figs. 12 and 13. Consequently when the forward movement is completed—that is to say, when the collar U has reached the shoulder *g* on the spindle, which would produce a dead-stop because of the head *a* of the tail of the hammer standing against the closed end *b* of the sleeve F—the end V of the spindle E receives the force or shock upon the spring W against the collar U, and this spring, yielding under such shock, produces an easy cushion or arrest of the forward movement of the receiver as that forward movement is completed, the yielding being indicated by broken lines, Fig. 13. This arrangement of the spring produces a simple and effective cushion, but the cushioning may be otherwise produced—as, for illustration, as seen in Fig. 14, the head *b'* of the tube F may be made longitudinally loose in the tube and a stationary collar *b''* arranged in the tube forward of the head *b'*, with a stronger spring W' between the head *b'* and the stationary collar *b''*, and so that when the head *a'* of the tail of the hammer is brought against the head *b'* at the completion of the forward movement the spring W' will yield to produce the cushion, as first described for the spring W.

To provide a lock to secure the parts in the closed position as well as to prevent the accidental discharge of the hammer, a dog *h*, arranged in the trigger-guard, is hung upon a pivot *i* and so as to swing up and down, the lever being constructed of a convenient shape for manipulation by the trigger-finger, the nose *k* of the dog being adapted to enter a corresponding recess *l* in the under side of the finger *f* when the sear is engaged with the hammer, as seen in Fig. 5, and so that the nose *k* will abut against the shoulder or rear end *m* of the recess *l* in the sear, and as seen in Fig. 5. When thus engaged, as the sear is hung in the receiver while the dog is hung in the stock portion of the arm, the separation of the two parts is impossible, and, further than this, the engagement of the dog with the sear is such that the sear cannot yield under the pull of the trigger. Consequently the hammer is positively locked in the cocked position as well as the parts positively locked in the closed position, and from which locked position they may be released by throwing the dog down, as seen in broken lines, Fig. 5.

On one side of the breech-piece, at its forward end, a longitudinal slide *n* is arranged in the groove *o*. (See Figs. 10 and 11.) This slide terminates at its forward end in a hook-shaped nose *p*, adapted to engage the head of the cartridge, so as to operate as an extractor for the cartridge-shell. This slide is permitted a certain amount of longitudinal movement. From the groove *o*, in which the slide is arranged, an opening *r* is made into the inside of the breech-piece, the breech-piece being cham-

bered or recessed upon its under side, as seen in Fig. 7. On the inside of the slide *n* are two projections *s* and *t*, which extend through the slot *r* into the inside of the breech-piece, and on the inside of the breech-piece a finger *u* is hung upon a pivot *v* and so as to swing in a horizontal plane. This finger stands between the two projections *s* and *t*, as seen in Fig. 10. From the hub of the finger is a rearward projection *x*, upon which a spring *y* bears. This spring rests upon a stud *z* in the breech-piece, (see Fig. 5,) and the breech-piece is also provided with another stud 2 at the rear upon the upper side of the spring, as also seen in Fig. 5. The tendency of the spring is to hold the finger *w* in a position to bring the extractor-slide *n* to its rear position, as seen in Fig. 10, but so that the spring yielding the extractor-slide may be drawn forward, as indicated in broken lines, Figs. 10 and 11. The projection *s* is of hook shape, as seen in Fig. 11, so as to embrace the finger *w*. The engaging surfaces of the finger and the projection *s* are beveled, so as to give them a cam shape, whereby the extractor-slide may be permitted a lateral movement, as seen in broken lines, Fig. 11, which adapts it to ride over the head of the cartridge, the spring of the finger yielding for such movement, and reacts, so as to bring the slide back to its normal position when the nose of the extractor shall have passed the flange of the cartridge.

As the breech-piece starts in its rear movement the extractor-hook is engaged with the cartridge, and the strength of the spring *y* is such that if there be little resistance for the withdrawal of the cartridge from the shell that cartridge or shell will retreat with the breech-piece; but should the cartridge or shell stick in its chamber the finger *w* yields and so as to retreat to a certain extent, leaving the extractor engaged with the cartridge and until the forward end 3 of the slot *r* shall come against the projection *t* on the slide, (see broken lines, Fig. 10,) when a positive engagement will be made between the breech-piece and the slide, and this engagement will come in the form of a blow upon the extractor, which will give to the cartridge or shell a sudden start, sufficient to relieve it from the stick in its chamber.

The projection *t* is made of hook shape upon its forward surface, so that engagement between the breech-piece and the extractor-slide will be positive and prevent an outward swing of the extractor-slide, so as to possibly escape from the head of the cartridge or shell. The finger *w* also serves as a means for retracting the firing-pin. The firing-pin is constructed with a laterally-projecting stud 4, (see Fig. 11, and also seen in Fig. 5,) which strikes the finger just before the nose of the firing-pin may reach the head of the cartridge and so as to normally hold the firing-pin with its nose so far to the rear of the front face of the breech-piece as to prevent its possible contact with the primer, and as seen in Fig. 5; but as the finger yields the force of the blow of the hammer upon the finger will cause the finger to yield, as indicated in broken lines, Fig. 5, and permit the nose of the hammer to strike the cartridge, and then the reaction of the finger will instantly withdraw the firing-pin. The spring *y* also serves as a means for yieldingly interlocking the receiver with the stock. The arm H of the stock is constructed with a notch upon its under side, forming a shoulder 5, and the rear end of the spring *y* is turned upward, so as to form a shoulder 6 to interlock with the shoulder 5 when the parts are closed, as seen in Fig. 5, and so as to yieldingly hold the two parts together that they may not readily open. The spring, however, yields to a force applied to separate the parts, and as indicated in broken lines, Fig. 5.

The receiver below the breech-piece is constructed with a chamber 7, adapted to receive several cartridges one upon another, they lying substantially parallel with each other with their heads at the rear, and in the chamber a spring-follower is arranged of any suitable character to operate to raise the cartridges as they are successively transferred by the breech-piece to the barrel, it being understood that as the breech-piece is opened the cartridges rise, so as to bring the uppermost cartridge into position with its head forward of the front face of the breech-piece, so that when the breech-piece returns it will strike the head of the uppermost cartridge and force it forward into the barrel. Followers and chambers for this arrangement of cartridges are too well known to require detailed description.

The arm of this invention is specially adapted for the employment of a cartridge holder or magazine which is adapted to receive the cartridges and so that the holder with the cartridges as a magazine may be introduced into the top of the receiver when the breech-piece is in the open position, and the cartridge holder or magazine with the cartridges thus introduced will take its place in the chamber of the arm and so that the spring-follower may raise the cartridges as they are required. The holder here shown is of that character which is open at the front and considerably shorter than the length of the cartridges, the rear end of the cartridges being inclosed between the two sides of the holder or magazine and so as to stand free therein, that the follower may act upon the cartridges to raise them. This is now a well-known character of magazine and does not require particular description, further than to say that 8 represents the cartridge-holder, which may be in any of the usual forms and is adapted to be introduced through the top of the receiver when the breech-piece is open and so that the holder after the cartridges are removed may pass down through a corresponding opening 9 in the bottom of the receiver and so that a second holder with its

cartridges being introduced the said second holder will force the preceding holder downward, outward, and from the receiver.

As the force applied to the cartridges is upward, it is necessary that the holder or magazine shall be held against such upward force. To accomplish this object, a spring-latch is arranged in rear of the holder 8, the nose 10 of which is adapted to engage a corresponding notch or shoulder 11 on the rear of the magazine, as seen in Fig. 5, and so that as the magazine reaches its home position in the receiver the latch will automatically engage the magazine; but the nose of the latch is adapted to escape from the magazine upon a downward pressure on the magazine, tending to force it downward from the receiver.

The latch as here constructed consists of a V-shaped or two-branch spring, 12 representing one branch and 13 the other. The one branch 12 is pierced at its upper end, so as to set over a rearwardly-projecting stud 14 on the receiver. The other branch 13 bears rearwardly against the sear and so as to operate as a sear-spring. At the junction of the two branches 12 and 13 below the nose 10 of the latch is attached or formed, the tendency of the spring being to force that latch forward, but yield to a rearward pressure on the nose of the latch. The spring thus arranged serves both as a sear-spring and as a latch for the magazine. It will be understood that while this arm is particularly adapted for the employment of the peculiar construction of magazine which has been described other forms of magazines, removable or otherwise, may be employed.

In another application, Serial No. 423,999, similar mechanism, so far as the separation of the receiver from the stock, the breech-piece, firing-pin, and hammer are concerned, is illustrated and described. Therefore no claim is made in this application upon the parts or construction shown and described in said application further than as hereinafter particularly recited.

Cartridge-extractors for breech-loading firearms have heretofore been made wherein the extractor hook or slide was permitted a limited amount of longitudinal movement independent of the breech-piece, whereby a blow-like force could be applied to the extractor to start a cartridge or shell from the barrel. We do not therefore claim, broadly, such an arrangement of cartridge-extractor; but the peculiar mechanism herein described for operating the extractor may be employed in breech-loading firearms in which other mechanism for operating the breech-piece is employed than that herein described.

The mechanism described for imparting the retreating movement to the firing-pin may be employed in other constructions of firearms in which the breech-piece is arranged for longitudinal reciprocating movement.

We claim—

1. In a firearm in which the receiver carrying the barrel is movable longitudinally toward and from the rear or stock portion of the arm to open and close the breach, the combination therewith of a spring between the two parts, the said spring being adapted to form a cushion at the termination of the opening movement of the two parts, substantially as described.

2. In a firearm in which the receiver is constructed with a tubular spindle extending from its rear end and the stock constructed with a guide within it to receive said spindle and within which the said spindle may slide in the opening and closing movement, the combination therewith of a hammer arranged within said spindle, the tail of the hammer extending through the rear end of the guide in which the spindle moves, the tail of the hammer constructed with a head upon its rear end adapted at a predetermined time to strike the rear end of the said guide and form a stop for the hammer, a collar loose on the tail of the hammer within the spindle, the hammer constructed with a shoulder forward of said collar, a mainspring around the spindle of the hammer and between the said collar and shoulder on the hammer, the tail of the hammer also constructed with a second shoulder between the said collar and spring-bearing shoulder, a second spring arranged around the tail of the hammer and in rear of said collar, the forward end of the spring resting against the said collar and the rear of the spring against a shoulder or bearing stationary in the spindle, the said second spring being of greater strength than that of the mainspring, and a sear hung in the receiver and adapted to engage the said hammer at the cocked position, substantially as described.

3. In a firearm, the combination of a longitudinally-reciprocating breech-piece, a slide arranged to move longitudinally in the breech-piece and extending forward terminates in a hook adapted to engage with the cartridge-head, a spring-finger hung within the breech-piece, a projection from the said slide, extending through a slot in the breech-piece and adapted to engage with said finger, the engaging surfaces of the said finger and projection inclined so as to produce a cam action, and a stop on the slide to limit its longitudinal movement, substantially as described.

4. In a firearm, the combination of a longitudinally-reciprocating breech-piece, a longitudinal firing-pin arranged within said breech-piece, and a spring-finger hung within the breech-piece and adapted to swing in a plane with the path of movement of the firing-pin, the firing-pin constructed with a stud projecting into the path of movement of said finger and which stud is adapted to engage said finger before the firing-pin reaches its extreme forward movement, substantially as and for the purpose described.

5. In a firearm in which the receiver, with the barrel it carries, is movable toward and

from the stock to produce the opening and closing movement of the breech, the combination therewith of a breech-piece arranged longitudinally in the receiver, an arm projecting forward from the stock and constructed with an upward and forwardly inclined slot, the breech-piece constructed to embrace the said arm and provided with a pin extending through said slot in the said arm, the breech-piece longitudinally guided in the receiver at its forward end, a spring in the breech-piece, adapted to work beneath the said arm, the arm, and the said spring, the one constructed with a notch and the other with a corresponding shoulder, whereby a latching engagement will be made between the breech-piece and the said arm when the parts are in the closed position, substantially as described.

6. In a firearm, the combination of a longitudinally-movable hammer, a sear hung forward of said hammer and extending rearward, adapted to engage said hammer in the cocked position, the sear constructed with a shoulder *m* in rear of the pivot on which it is hung, and a dog *h*, hung in the trigger-guard and so as to swing vertically, the nose of the dog adapted to engage said sear only when the sear has engaged the hammer in the cocked position, substantially as and for the purpose described.

7. In a firearm in which the receiver and the barrel it carries are movable longitudinally forward and backward toward and from the stock portion of the arm to open and close the breech-piece, the combination therewith of a longitudinally-movable hammer arranged to move backward and forward with the receiver, a sear hung in the receiver forward of the hammer and extending rearward, adapted to engage the hammer in the cocked position, a dog *h*, hung in the stock portion of the arm and so as to swing in a vertical plane, the sear constructed with a shoulder *m*, and the nose of the dog adapted to engage said shoulder of the sear when the parts are in the closed position and the hammer held by the sear in the cocked position, substantially as and for the purpose described.

8. In a firearm, the combination of a receiver, a longitudinally-reciprocating breech-piece, a chamber in the receiver beneath the hammer and open at the top when the breech-piece is in the open position, the said chamber also having an opening through the bottom, and the said chamber adapted to receive a removable cartridge holder or magazine when the breech-piece is in the open position, the said opening in the bottom of the receiver adapted for the escape of the said holder, a sear hung in the receiver and extending rearward from the said chamber, adapted to engage the hammer at full-cock with a V-shaped spring attached by one arm to the receiver and extending downward, the other arm of the spring bearing upon the sear with a tendency to force it into its engaging position, and the downwardly-projecting portion of the spring provided with a nose adapted to engage the said holder or magazine and so as to prevent the forward movement of said holder or magazine, substantially as described.

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

JOHN M. BROWNING.
MATTHEW S. BROWNING.

Witnesses:
E. A. ENSIGN,
JOHN E. RAMSDEN.