

No. 675,218.

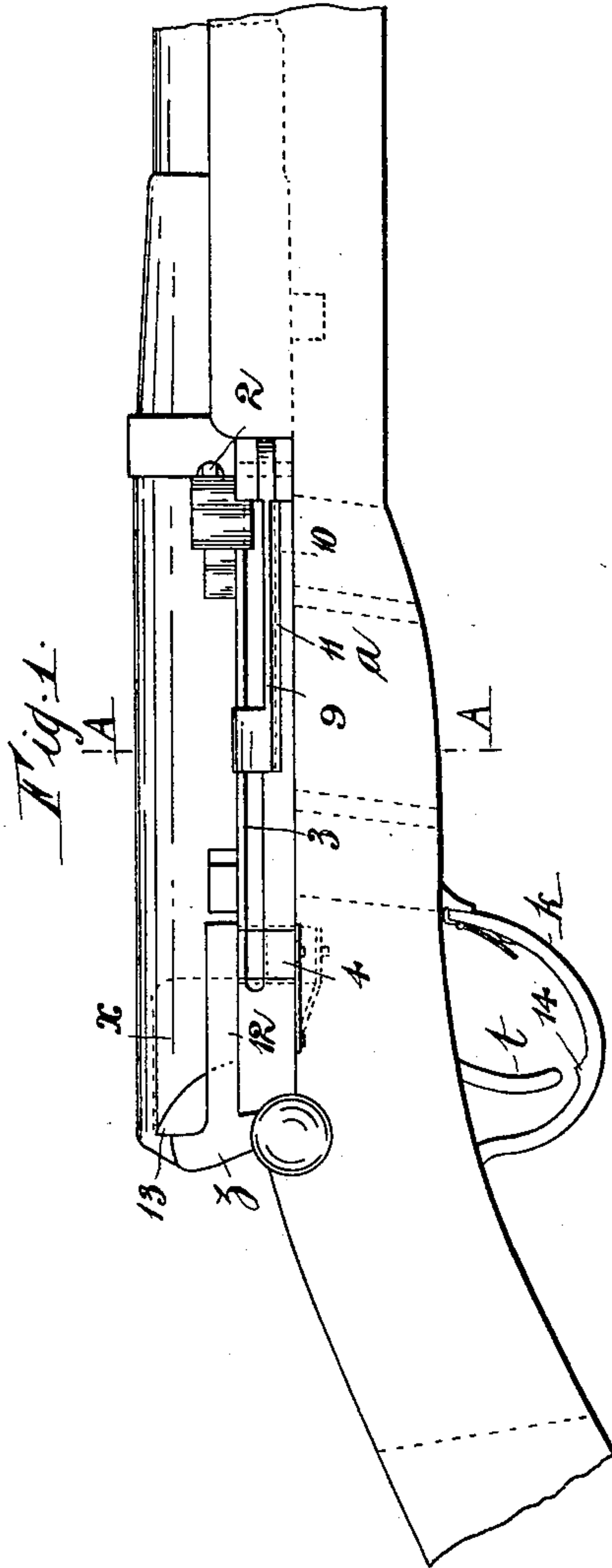
Patented May 28, 1901.

J. HYLARD.
MAGAZINE RIFLE.

(Application filed Oct. 27, 1900.)

(No Model.)

4 Sheets—Sheet 1.



Witnesses

Walker C. Hart.

William G. Holden.

Inventor

John Hyland

by

Edw. Watson & Son

Attorneys

No. 675,218.

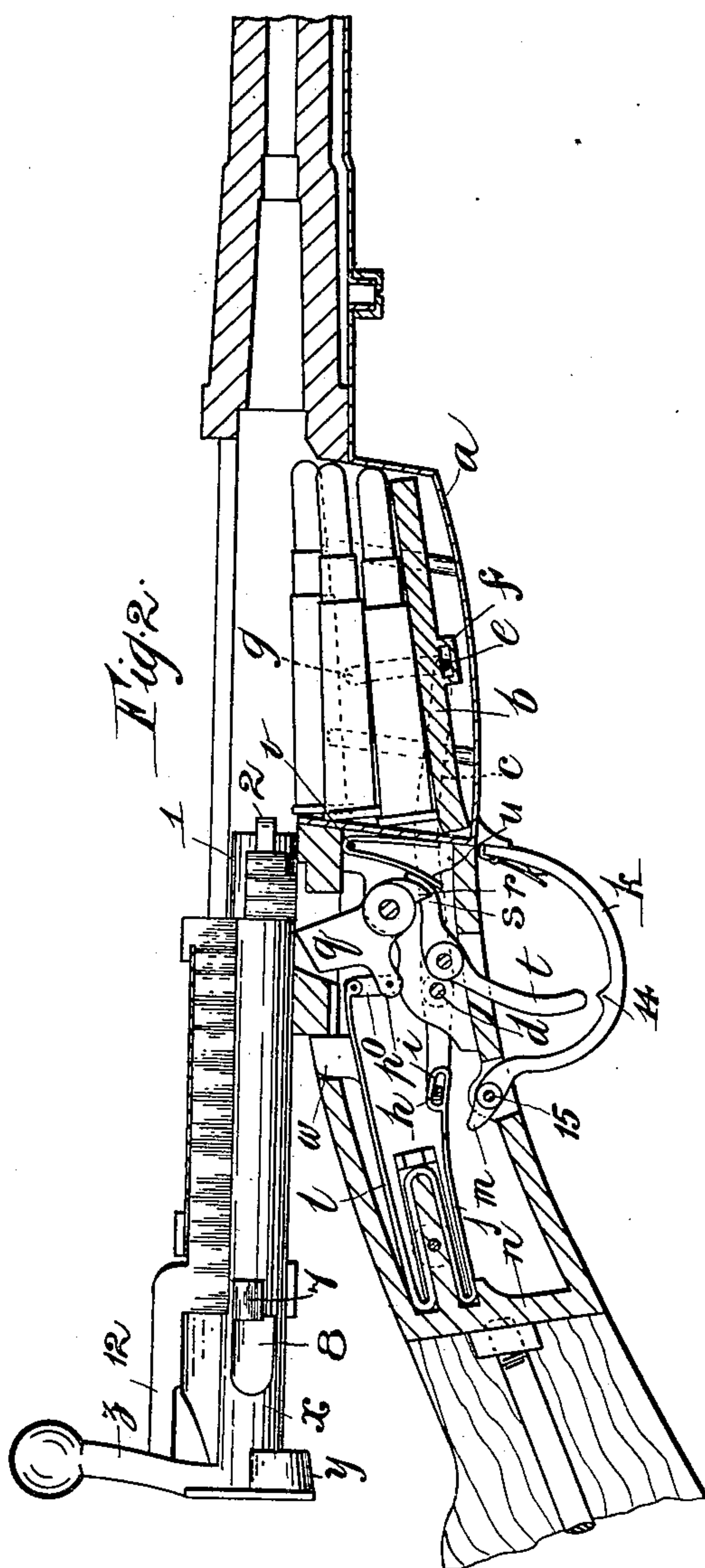
Patented May 28, 1901.

J. HYLARD.
MAGAZINE RIFLE.

(No Model.)

(Application filed Oct. 27, 1900.)

4 Sheets—Sheet 2.



Witnesses

Walker C. Hart.

William G. Holden.

Inventor

John Hyland

by E. W. Bates & Son

Attorneys

No. 675,218.

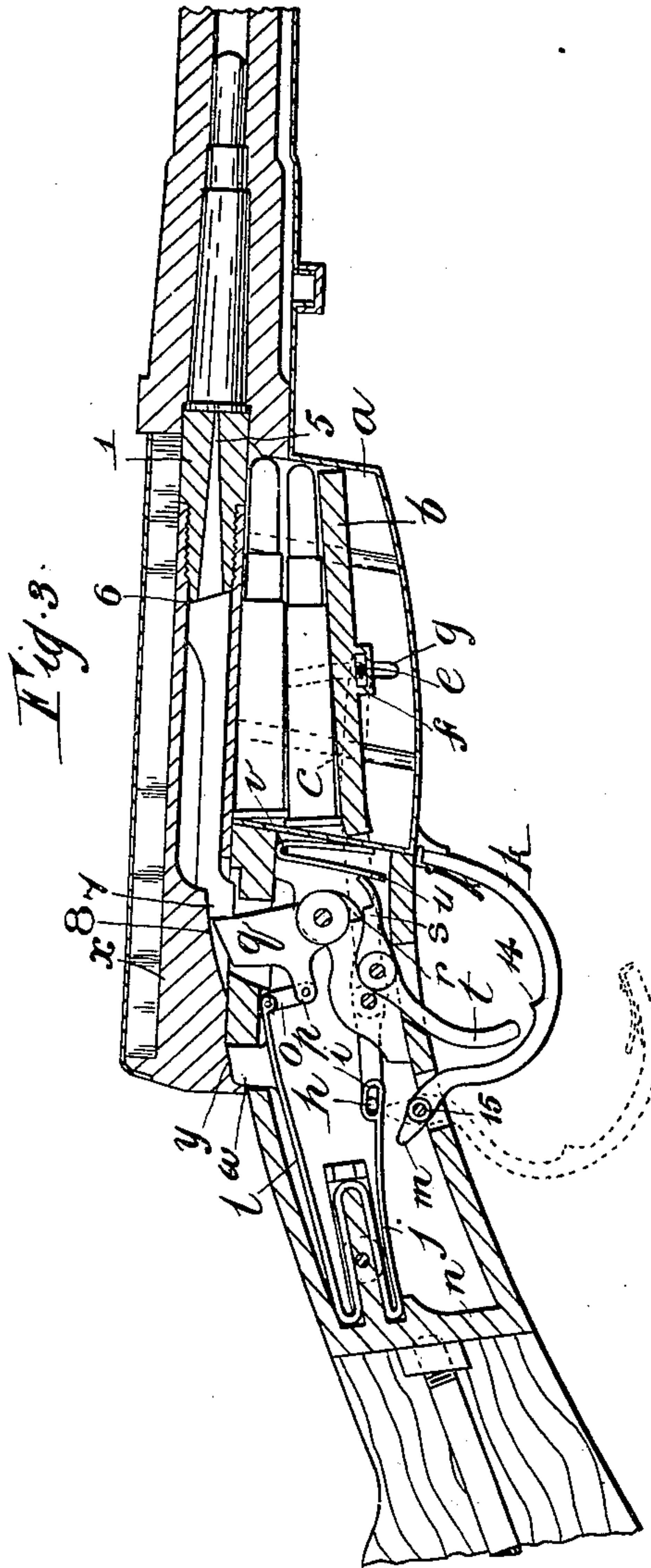
Patented May 28, 1901.

J. HYLARD.
MAGAZINE RIFLE.

(Application filed Oct. 27, 1900.)

(No Model.)

4 Sheets—Sheet 3.



Witnesses

Walker C. Hart.
William G. Holden.

Inventor
John Hyland
by Edw. Bates & Son
Attorneys

No. 675,218.

J. HYLARD.
MAGAZINE RIFLE.

Patented May 28, 1901.

(No Model.)

(Application filed Oct. 27, 1900.)

4 Sheets—Sheet 4.

Fig. 4.

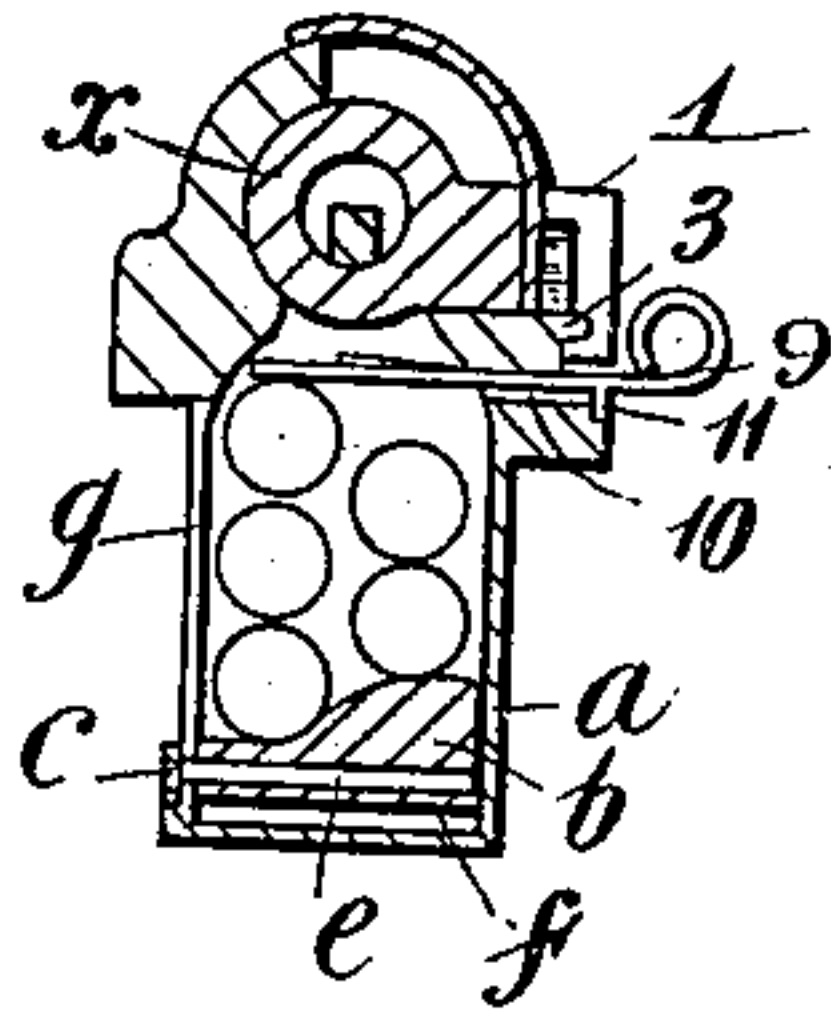


Fig. 5.

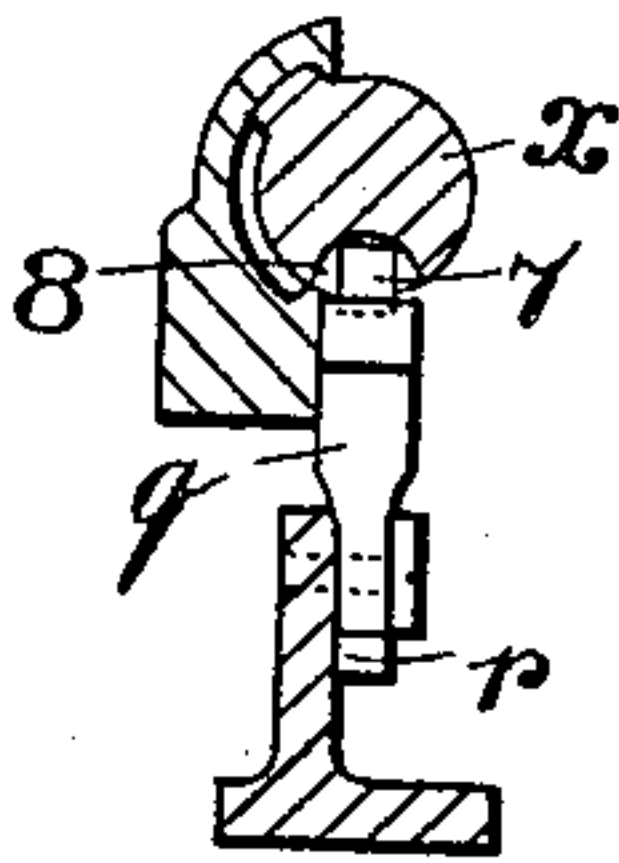


Fig. 6.

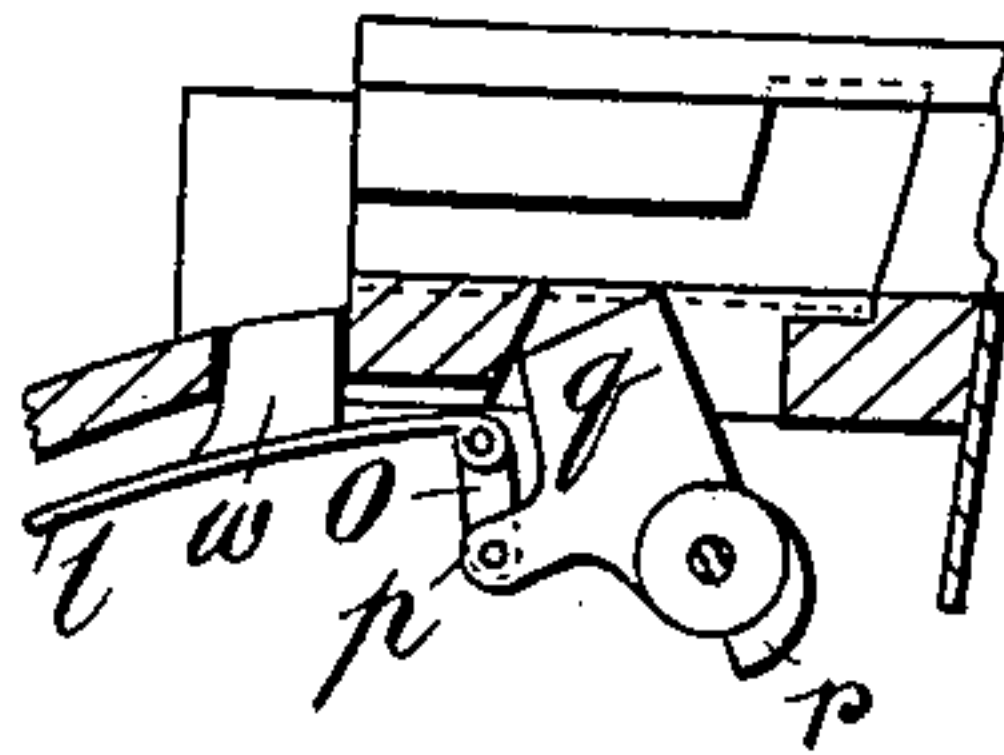


Fig. 7.

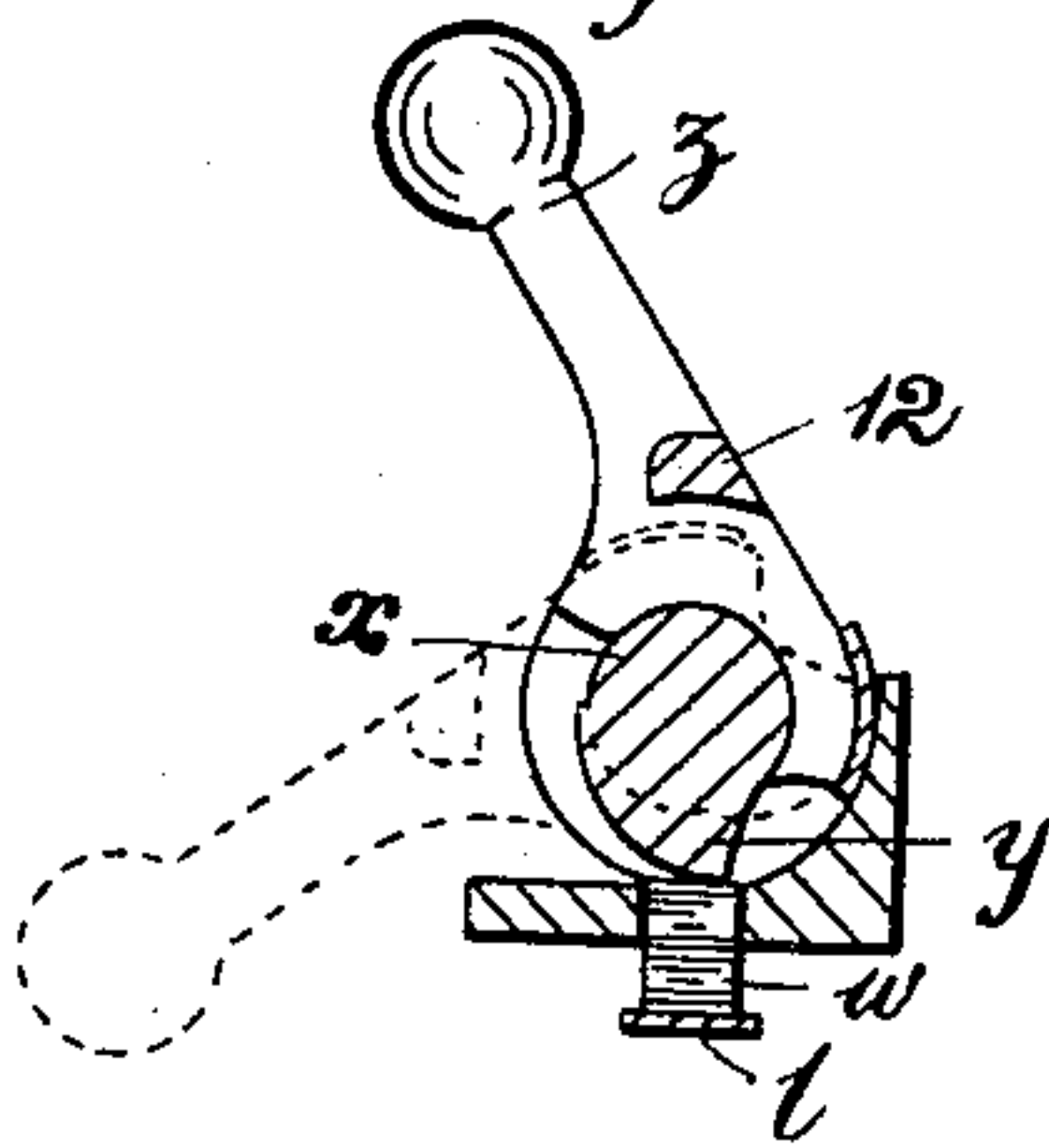


Fig. 8.

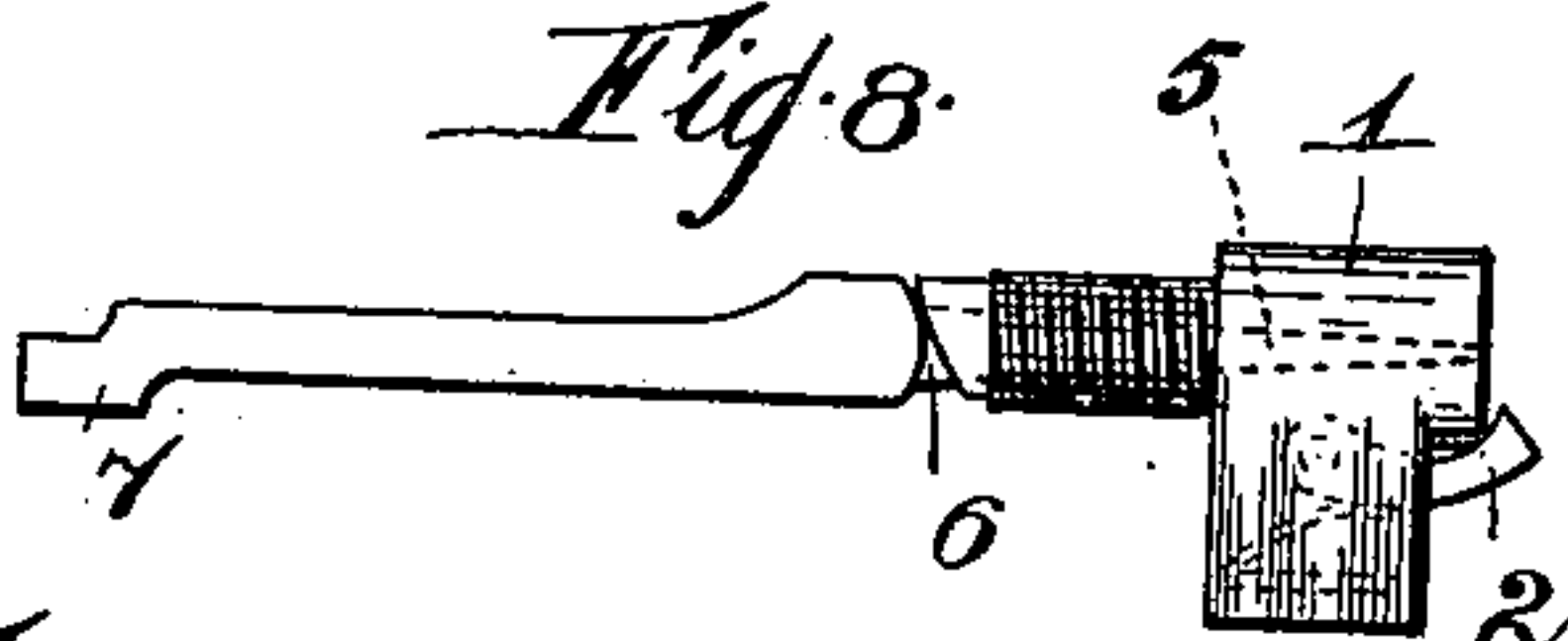
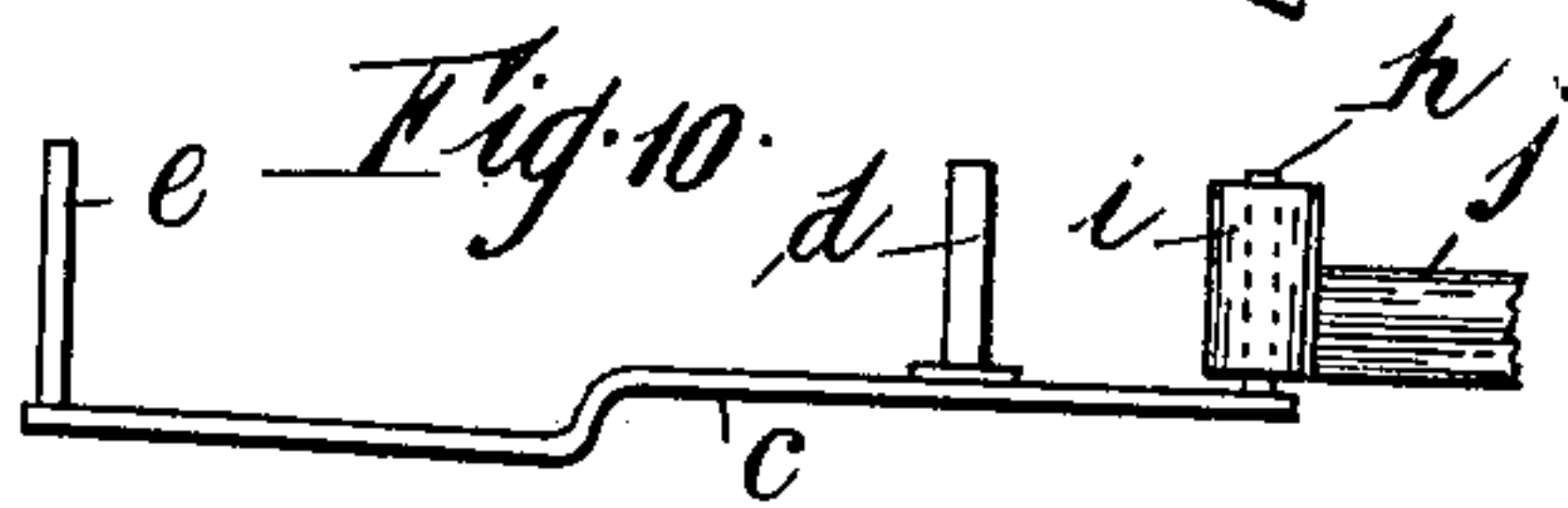
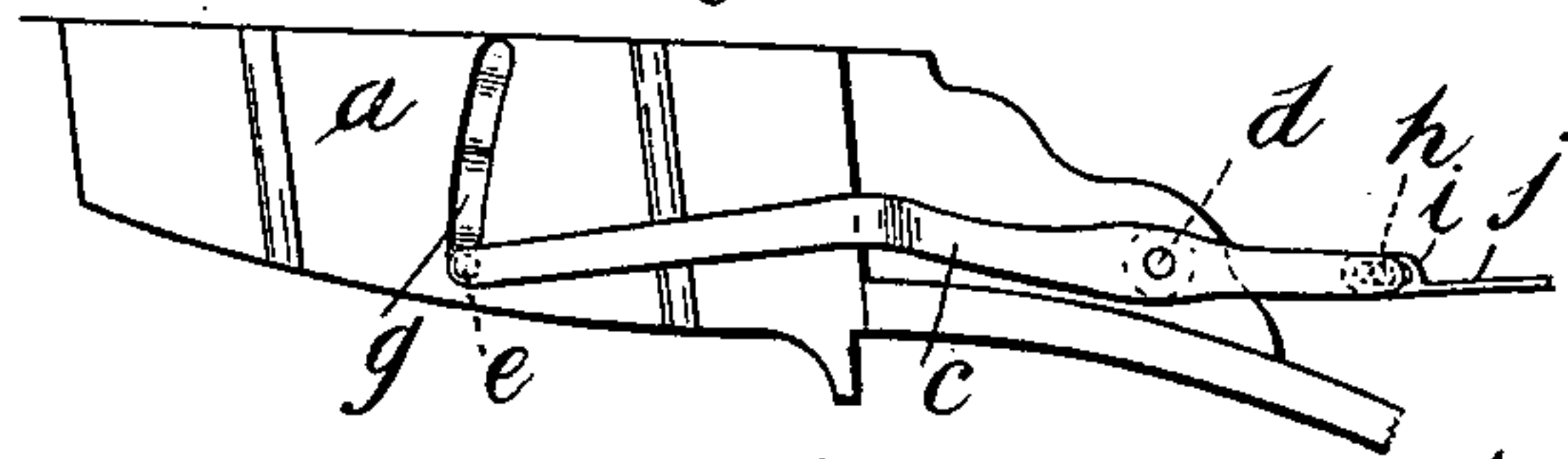


Fig. 9.



Witnesses

Walker C. Hart
William G. Holden.

Inventor
John Hyland
by Edwin Waters & Son
Attorneys

UNITED STATES PATENT OFFICE.

JOHN HYLARD, OF ST. KILDA, VICTORIA, ASSIGNOR TO FREDERICK JAMES CARR, OF SAME PLACE.

MAGAZINE-RIFLE.

SPECIFICATION forming part of Letters Patent No. 675,218, dated May 28, 1901.

Application filed October 27, 1900. Serial No. 34,623. (No model.)

To all whom it may concern:

Be it known that I, JOHN HYLARD, gentleman, a subject of the Queen of Great Britain, residing at No. 20 Acland street, St. Kilda, in the British Colony of Victoria, have invented an Improved Magazine-Rifle, of which the following is a specification.

This invention has been devised in order to provide a magazine-rifle of the bolt-action type which will be simple in its construction, have few working parts, and therefore not be liable to get out of order, special provision being made for preventing the discharge of the rifle except when the bolt is in its closed and locked position.

In order that the invention may be readily understood, it will be described by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the breech portion of a magazine-rifle constructed according to said invention and showing the bolt in its closed and locked position. Fig. 2 is a longitudinal central section of the rifle, showing the bolt in its withdrawn or open position. Fig. 3 is a similar view to Fig. 2, but showing the bolt closed and locked and the hammer in the position it occupies after firing. Fig. 4 is a vertical transverse section on line A A, Fig. 1. Fig. 5 is a section of the breech-bolt, also rear elevation of the hammer. Fig. 6 is a side elevation of the hammer. Fig. 7 is a sectional elevation showing the position of the breech-bolt in full and dotted lines. Fig. 8 is a side elevation of the firing-pin. Fig. 9 is a like view of the magazine. Fig. 10 is a like view of the lever operating the follower of the magazine.

The same characters of reference are used to designate the same parts in all the figures.

The magazine *a* in the instance illustrated is adapted to contain five of the ordinary .303 cartridges used by the Imperial British army; but it may, however, be constructed to hold eight or any other preferred number, it being merely necessary to increase the depth to suit the increase.

A plate or follower *b* is fitted within the magazine *a*, so that it can be raised and lowered freely therein, and said follower is constructed, as illustrated in Fig. 4, with one side raised above the other in order to admit

of said cartridges fitting within the magazine, so that they alternate with each other, as illustrated in said figure.

A lever *c* is fulcrumed, as illustrated at *d*, in a fixed part of the breech-body of the rifle, and it is provided at its free end with a laterally-projecting pin *e*, which engages with a loop *f* under the center of the follower *b*, said pin being arranged to project through a curved slot *g*, which is cut for the purpose in one of the sides of the magazine *a*. Another pin *h* on the opposite end of the lever *c* engages with the looped or bent-over end *i* of a spring *j*. The trigger-guard *k*, which is fulcrumed or pivoted at its rear end, as illustrated at 15, is formed with a projecting lug *m*, which is arranged to bear against the under side of the spring *j* when drawn back into the position indicated in Fig. 3, thereby lowering the pin *e*, and therefore the follower *b*, to the bottom of the magazine *a*. An extension *l* of the spring *j* forms in conjunction therewith a somewhat peculiarly-shaped spring approximating in shape the letter **W**, it being bent back twice upon itself at the center, as shown in Figs. 2 and 3. The central part of the spring *jl* is secured rigidly in position by being bolted to a lug in the breech-frame *n*. The free end of the spring *l* is connected by links *o* to lugs *p*, projecting rearwardly from the hammer *q*, and its tendency is to always force said hammer or striker forward into its firing position, as illustrated in Fig. 3.

The hammer *q* is formed at its lower end with a cam or detent *r*, with which the forwardly-projecting arm *s* of the trigger *t* automatically engages when the hammer or striker is drawn back into its cocked position by the rotation of the bolt, a spring *u* being provided whose tendency is to keep the arm *s* of the trigger in engagement with said cam or detent *r* on the hammer or striker *q*. This spring may be retained in position by a pin *v*, extending across and engaging with the loop or apex of the V-shaped spring *u*.

The spring *l* is formed at its forward end with an upwardly-projecting block or wearing-piece *w*, and the rear end of the bolt *x* is provided with a downwardly-projecting cam or eccentric piece *y*, which when the lever or

handle z of the bolt is in its raised position—that is, when the bolt is unlocked, as indicated by full lines in Fig. 7—bears against said block or bearing-piece w and cocks the hammer at the same time the trigger-spring u automatically locks the trigger in engagement with the hammer and retains it in that position until the breech-bolt is driven home and the cam y is moved away from the bearing-block w . This construction admits of the hammer q being released from its cocked position when the rifle is fully loaded without fear of exploding the cartridge in the breech, all that is necessary being to unlock the bolt x , without, however, withdrawing it, then to pull the trigger t , so as to release the hammer q , the forward movement of which will be arrested by reason of the cam y bearing against the block w on the spring l . On turning the bolt into its locked position the spring l is gradually released, and thus allows the hammer to move slowly forward into its released or safety position without fear of exploding the cartridge in the breech. If it is required to again cock the hammer q , it can easily be done by simply rotating the bolt x into its unlocked position and then returning it again into its locked position.

The bolt x is constructed with a head 1 at its forward end, carrying an extractor 2, which may be constructed in the ordinary manner, as illustrated, said head being screwed in the forward end of the bolt x , so that this latter can be rotated to lock and unlock same. The bolt-head 1 is constructed so that it projects laterally, as illustrated in Fig. 4, and engages with a rib or flange 3 along the edge of the opening through the breech into the magazine. A downwardly-sliding filling-piece 4 at the rear end of this rib 3 is provided for the purpose of enabling a gap to be formed in said rib, so that the lug 1 can be disengaged therefrom and be turned upward to enable the bolt to be withdrawn from the rifle when required for any purpose—as, for instance, in order to inspect the barrel.

The rear end of the breech-bolt is constructed with a bridge-piece 12 for connecting the main part of said bolt to the handle or lever thereof. This materially strengthens the construction of the bolt and admits of its being cut away in the center, if desired, to allow the hammer to strike full upon the end of the firing-pin. It also serves to grip a horn or upwardly-projecting part 13 of the breech-body, and thus assists in retaining the breech-bolt in its locked position.

The firing-pin 5 is arranged to slide longitudinally within the bolt x , and its forward end is arranged to bear against a cam-shaped surface 6 on the bolt-head 1, so that when the bolt is turned around into its unlocked position the firing-pin will be forced back into its withdrawn position and cannot be again projected until the bolt is again locked securely in its closed position. The rear end of the firing-pin 5 is formed with a head 7, project-

ing laterally therefrom and sliding within a slot or recess 8 in the under side of the bolt x . This slot or recess enables the hammer q to strike the head of the firing-pin only when the bolt x is in its closed and locked position, the effect of pulling the trigger at other times being merely to allow the hammer or striker q to contact with the under side of the bolt x . The slot or recess 8 is made wide enough to allow a certain amount of play for the bolt, and thus admit of its being turned around into its unlocked position. One effect of firing the rifle is to bring a brake action to bear upon the bolt x , thus safeguarding against the possibility of the bolt being opened by the shock of the discharge. This brake action is produced partly by the wearing-block w bearing against the under side of the bolt when the hammer is released and partly by the cam y upon said bolt bearing against the hammer-spring l , thereby preventing its accidental rotation from the locked into the unlocked position.

The cut-off 9 for converting the rifle into a single-loader is pivoted at its forward end and projects through a slot 10 in the breech-body in the ordinary manner. In order to prevent dust or dirt entering the magazine through this slot 10, the cut-off is formed with a downwardly-projecting flange 11 upon its under side, which effectually closes the opening into the magazine without interfering with the operation of the cut-off.

A small projection 14 may be provided on the bottom of the trigger-guard, so that the trigger may be used as a telltale to indicate when the hammer of the rifle is at full-cock.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a magazine-rifle the combination with a hammer actuated by a spring, of a breech-bolt having a downwardly-projecting cam or eccentric adapted to bear upon said hammer-actuating spring when the bolt is turned into its unlocked position substantially as specified.

2. In a magazine-rifle a hammer-actuating spring having a bearing-block formed upon or attached to it, in combination with a breech-bolt having a downwardly-projecting cam or eccentric adapted to bear upon said block when said breech-bolt is turned into its unlocked position substantially as specified.

3. In a magazine-rifle, the combination with the hammer thereof actuated by a spring, of a breech-bolt having a downwardly-projecting cam or eccentric adapted to bear upon said hammer-actuating spring when the bolt is turned to its unlocked position, an operating-lever, and a bridge-piece for connecting said lever to said bolt.

JOHN HYLARD.

Witnesses:

EDWARD WATERS,
EDWARD WATERS, Jr.