

(No Model.)

L. M. R. DAUDETEAU.
REPEATING FIREARM.

5 Sheets—Sheet 1.

No. 473,827.

Patented Apr. 26, 1892.

Fig. 1.

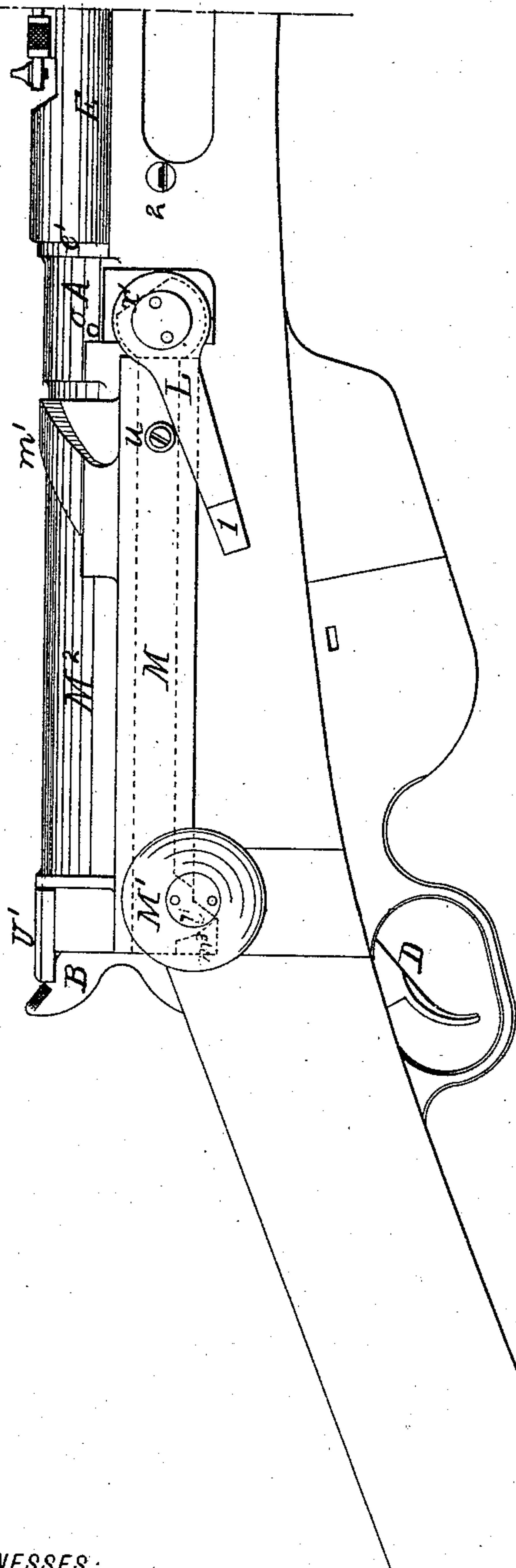
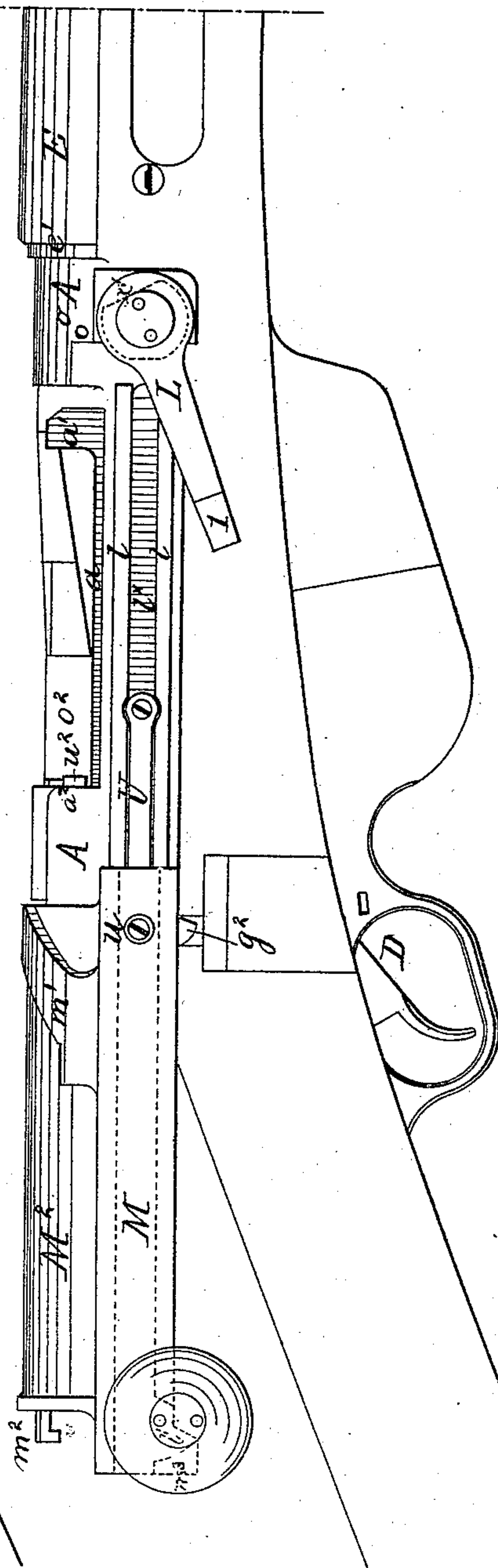


Fig. 2.



WITNESSES:

John Revell
George Baumann

INVENTOR

Louis M. R. Daudeteau

BY

Horson and Horson
his ATTORNEYS

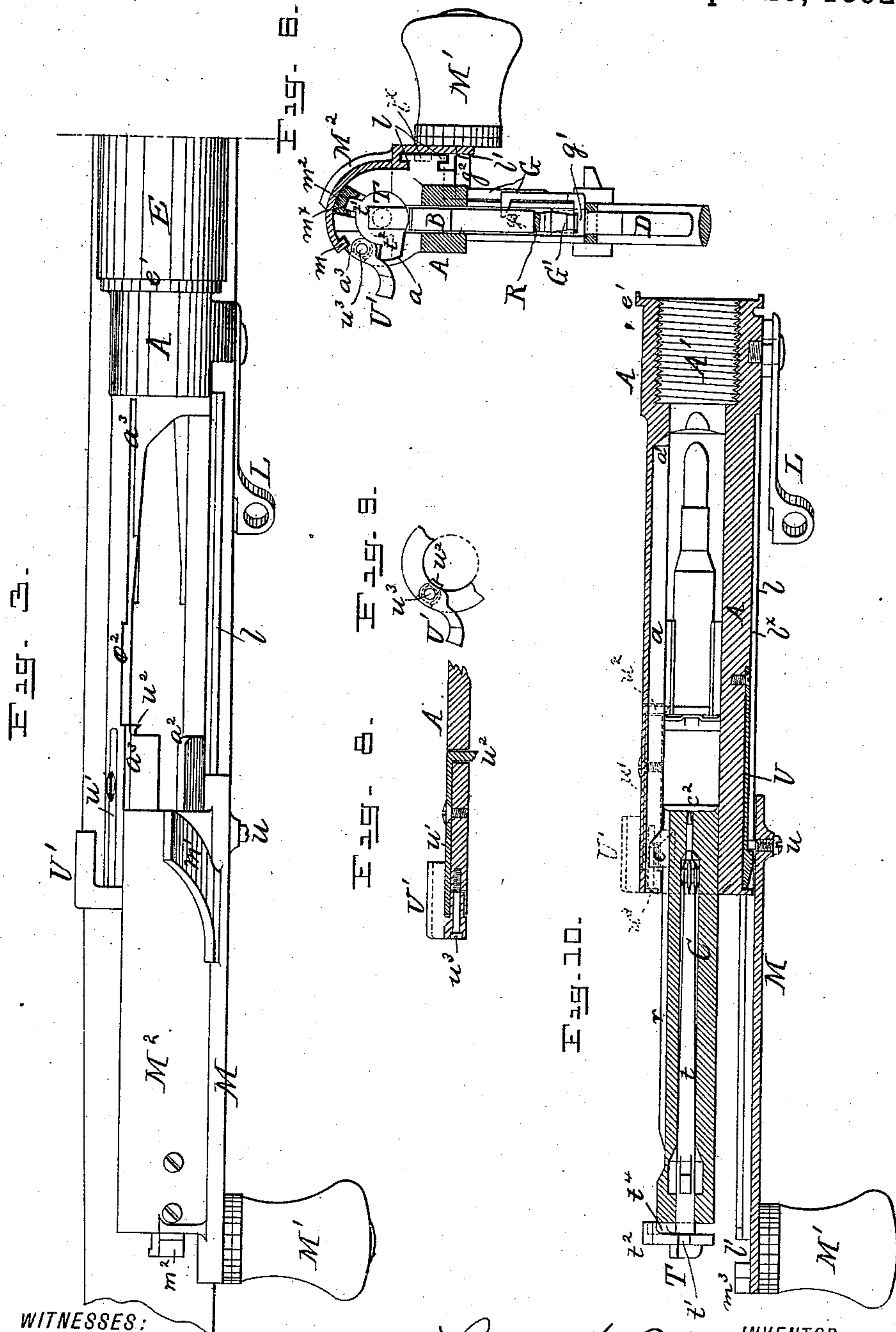
(No Model.)

L. M. R. DAUDETEAU.
REPEATING FIREARM.

5 Sheets—Sheet 2.

No. 473,827.

Patented Apr. 26, 1892.



WITNESSES:

John Revell
George Baumann

INVENTOR
Louis M. R. Daudeteau

BY
Horror and Horror
his ATTORNEYS

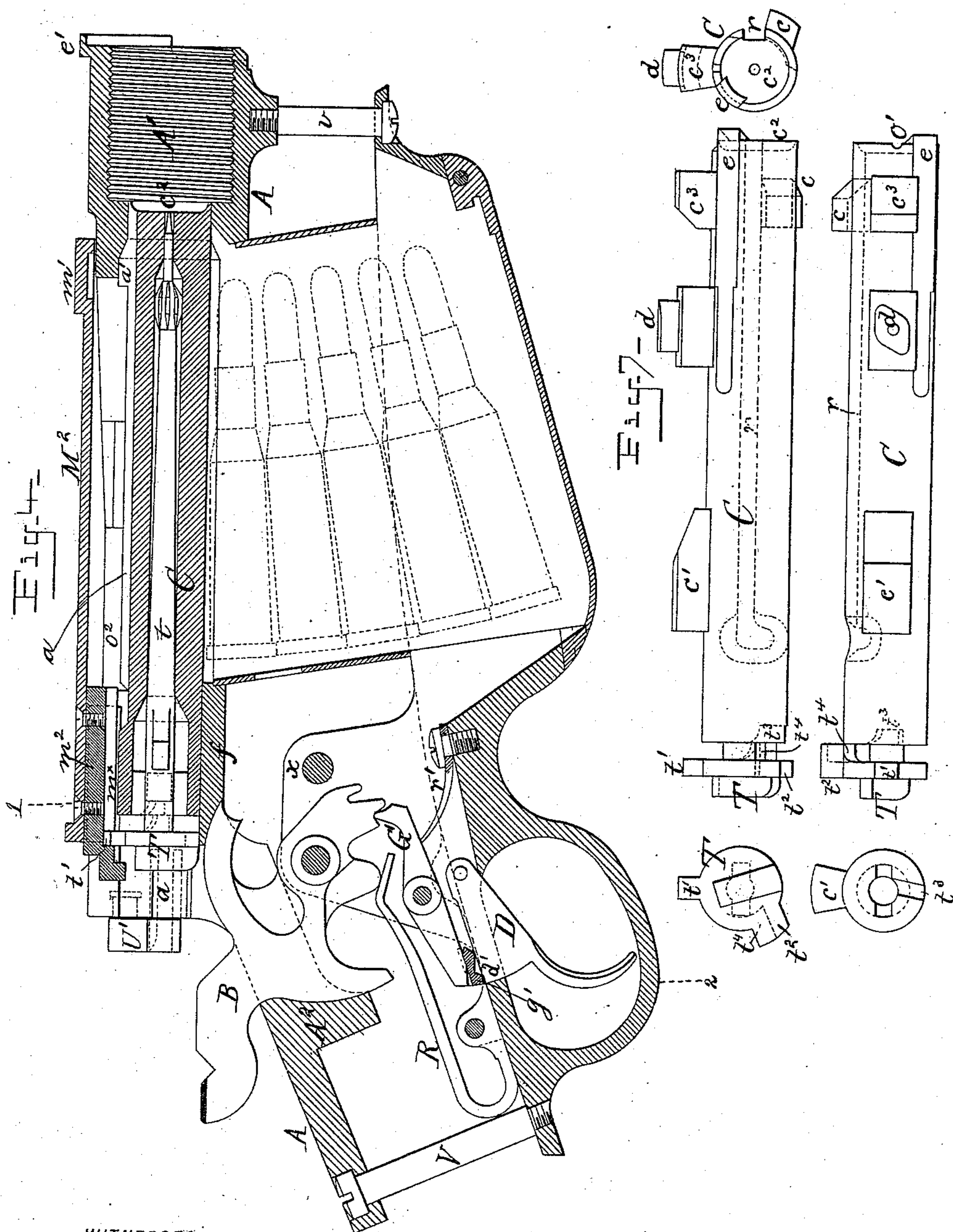
(No Model.)

L. M. R. DAUDETTEAU.
REPEATING FIREARM.

5 Sheets—Sheet 3.

No. 473,827.

Patented Apr. 26, 1892.



WITNESSES:

George Baumann
John Revell

INVENTOR
Louis M. R. Daudeteau
BY
Horron and Horron
his ATTORNEYS

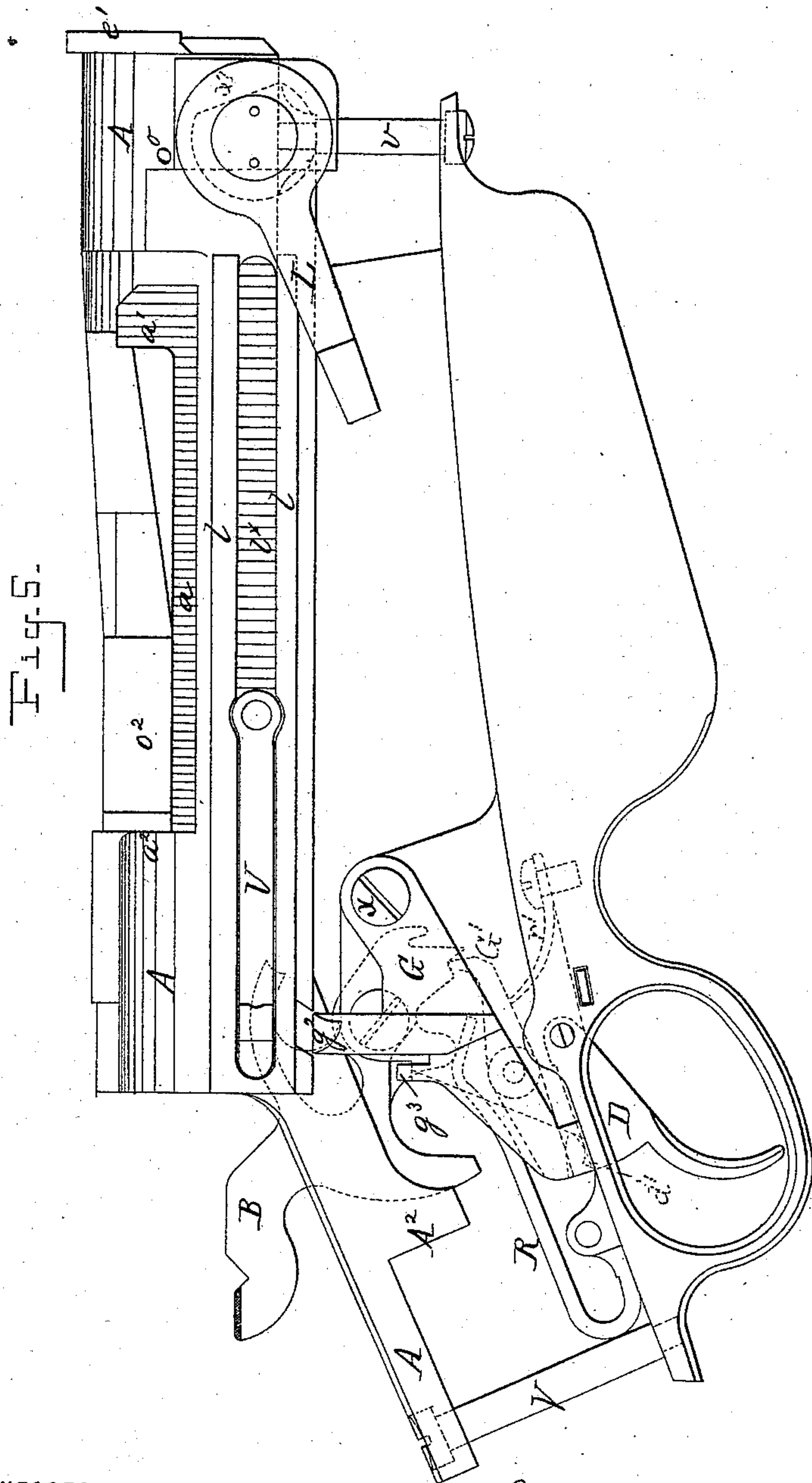
(No Model.)

L. M. R. DAUDETTEAU.
REPEATING FIREARM.

5 Sheets—Sheet 4.

No. 473,827.

Patented Apr. 26, 1892.



WITNESSES:

George Baumann
John Revell

INVENTOR

Louis M. R. Daudetteau

BY

Howe and Howe
his ATTORNEYS

(No Model.)

5 Sheets—Sheet 5.

L. M. R. DAUDETEAU.
REPEATING FIREARM.

No. 473,827.

Patented Apr. 26, 1892.

Fig. 11.

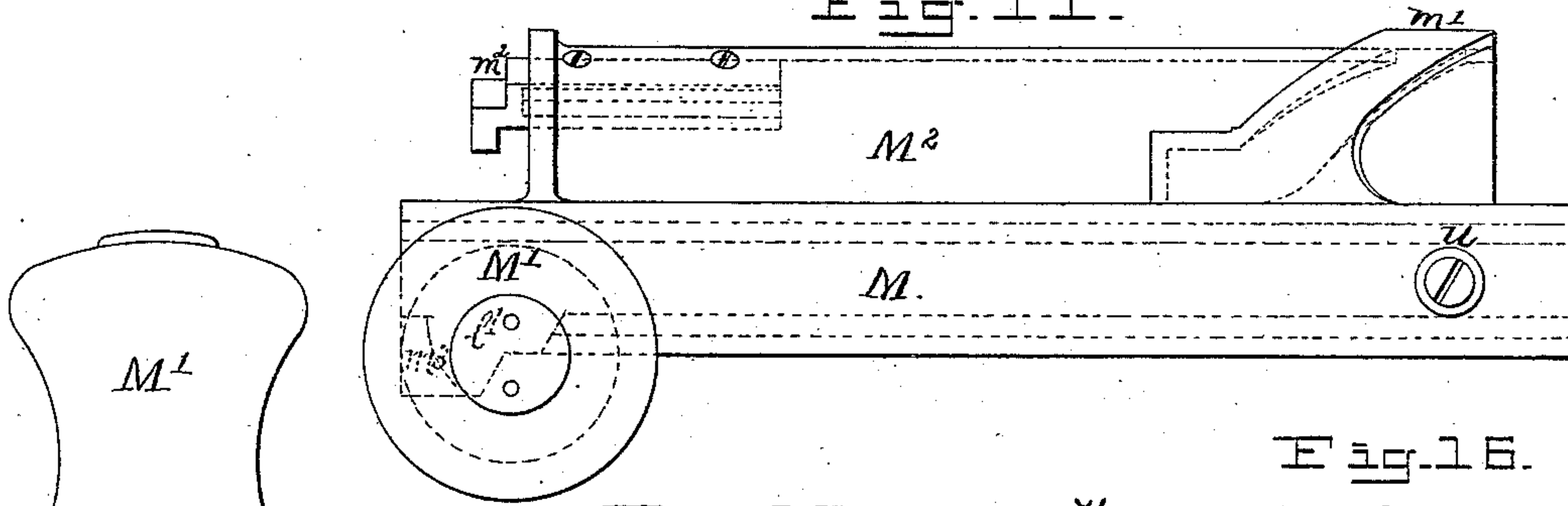


Fig. 12.

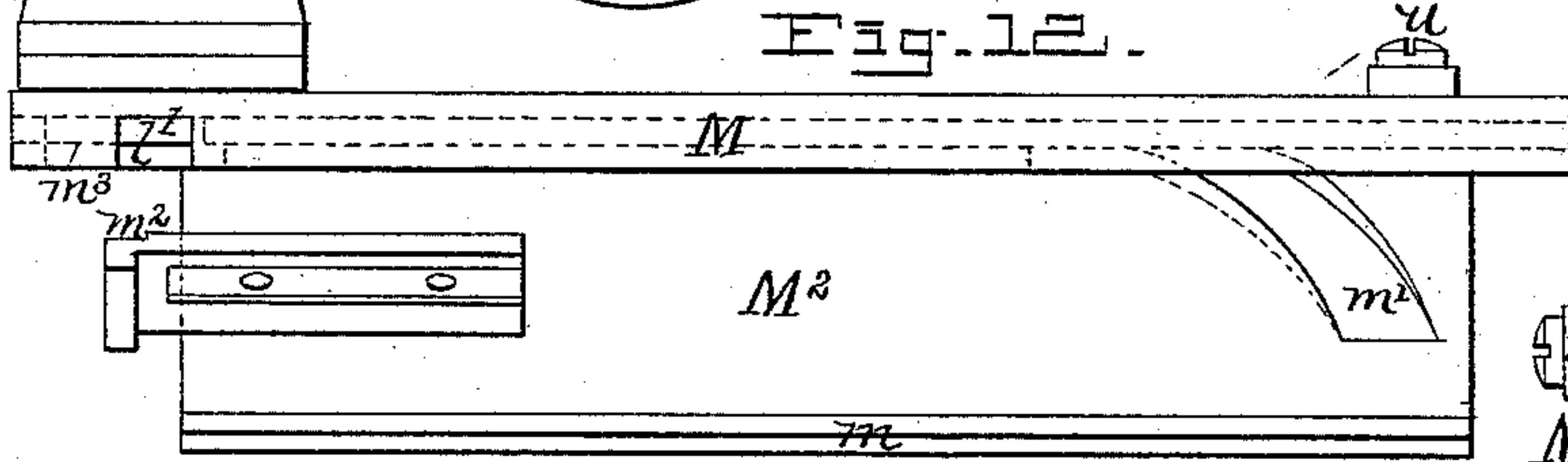


Fig. 16.

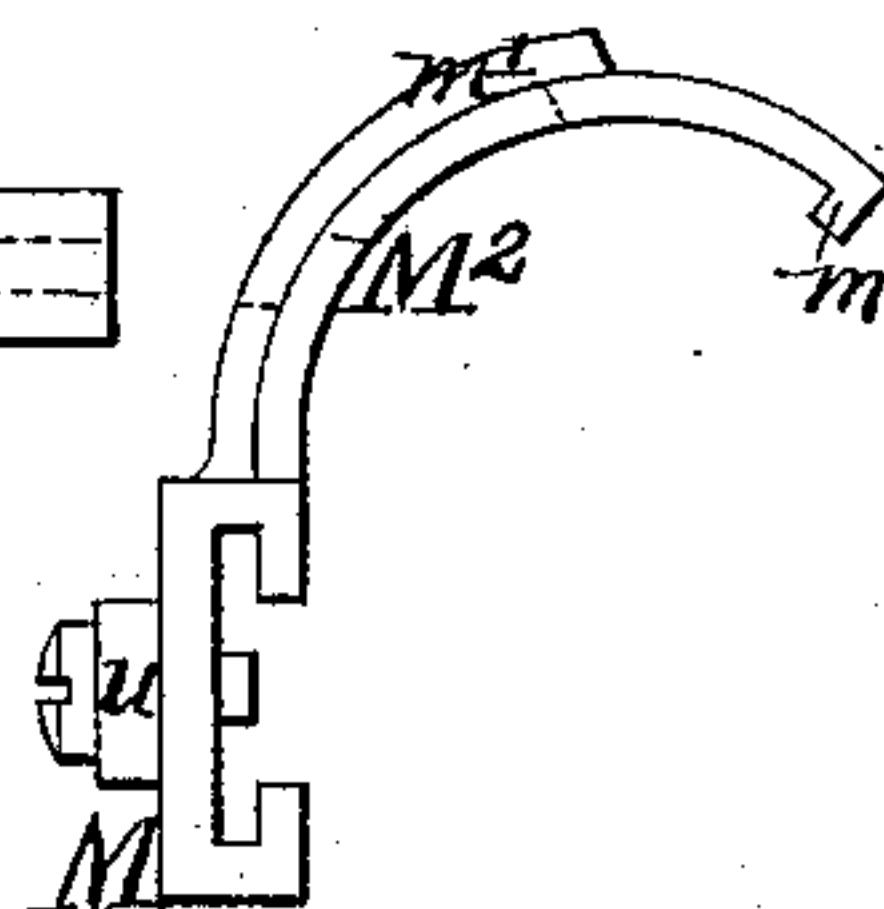


Fig. 13.

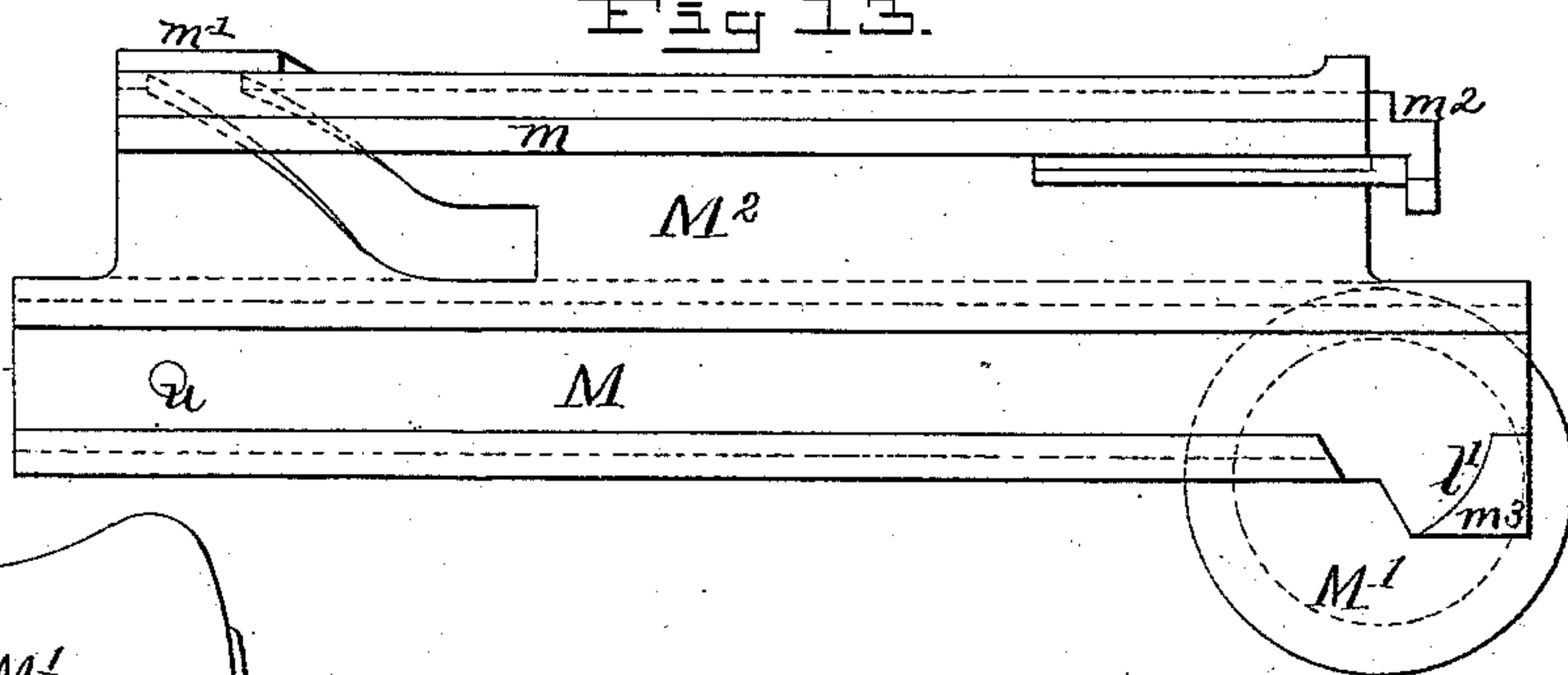


Fig. 15.

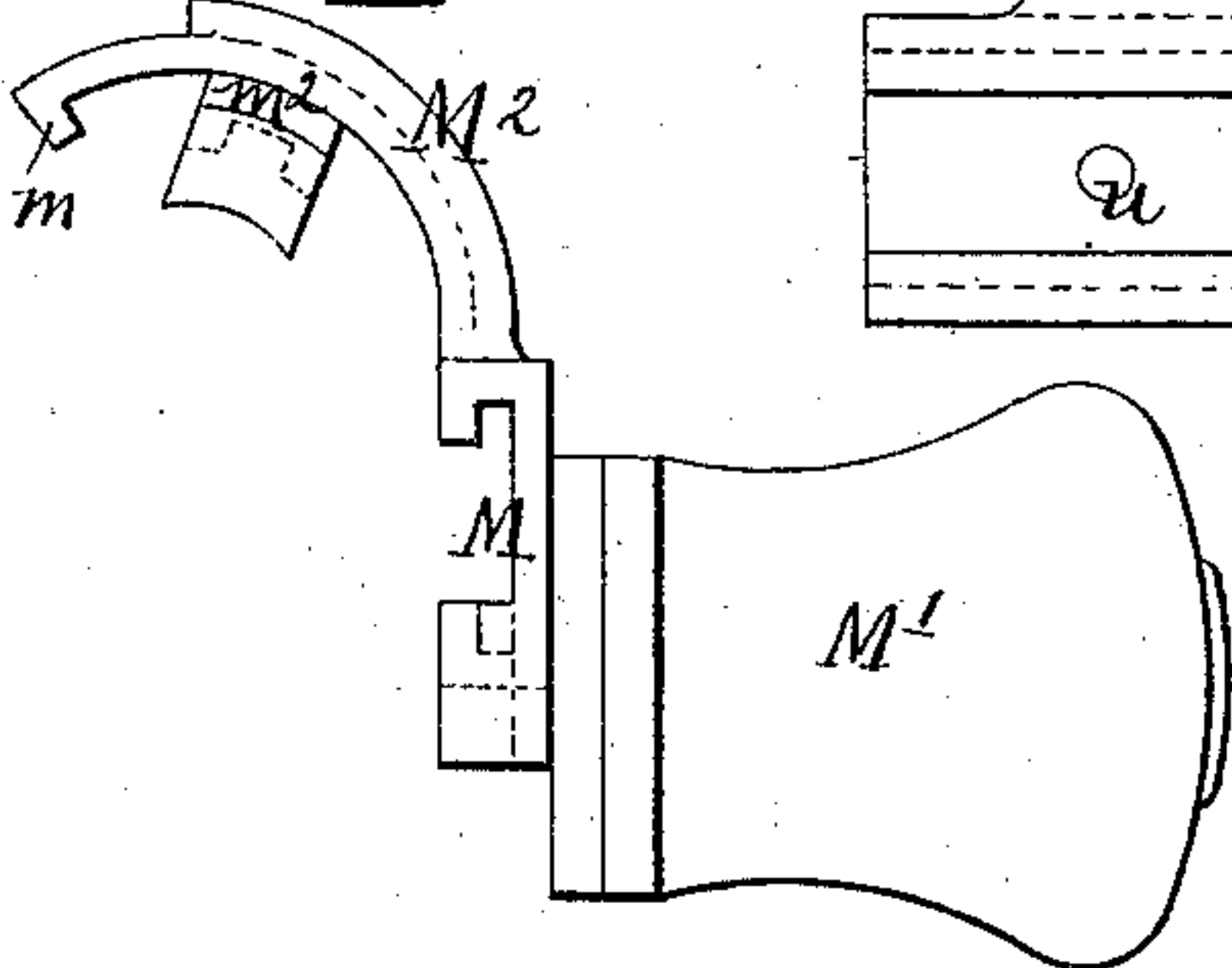
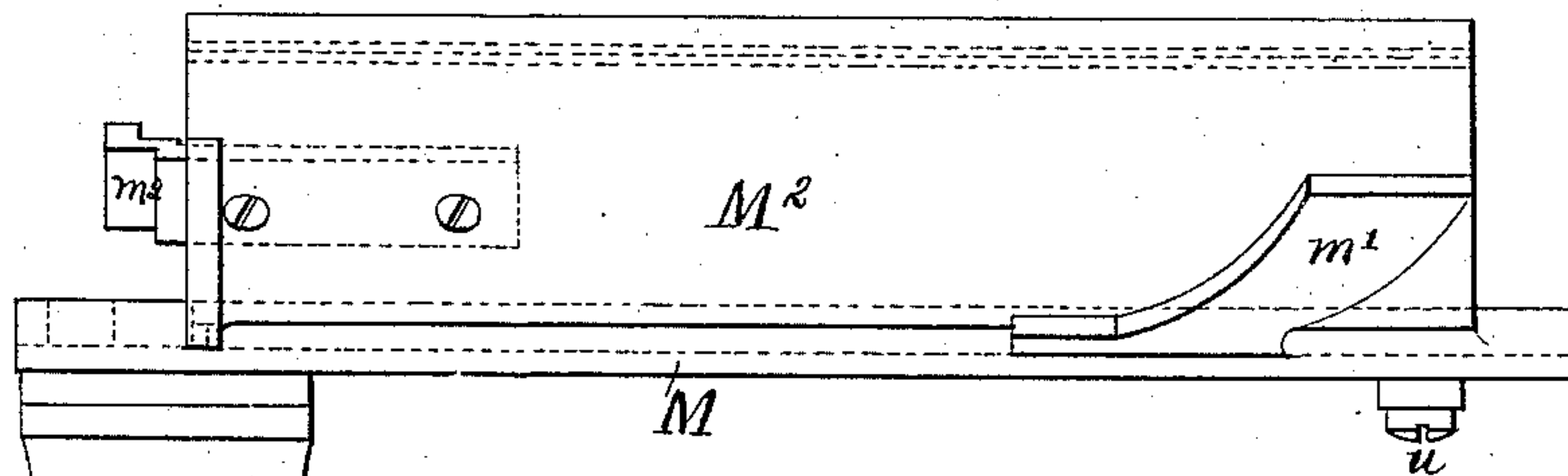


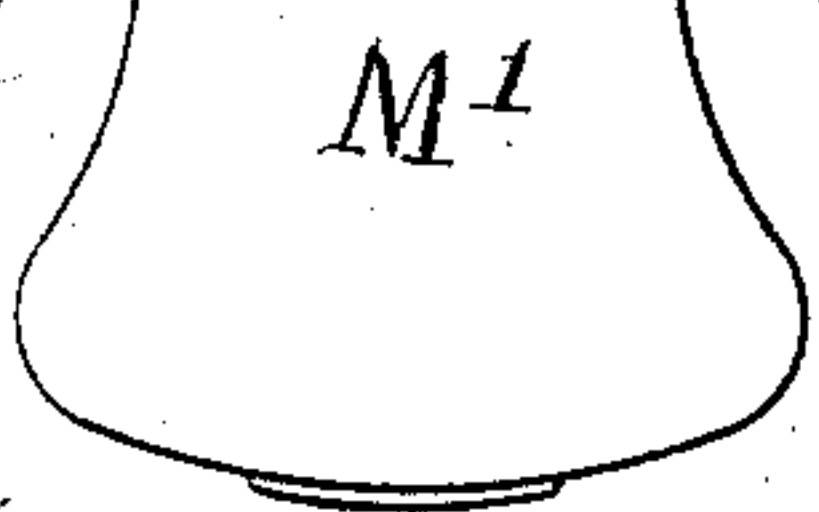
Fig. 14.



WITNESSES:

John Revell

Jas. L. Skidmon,



INVENTOR

Louis M. R. Daudeteau

BY

Howson and Howson,
his ATTORNEYS.

UNITED STATES PATENT OFFICE.

LOUIS MARIE RENÉ DAUDETTEAU, OF VANNES, FRANCE.

REPEATING-FIREARM.

SPECIFICATION forming part of Letters Patent No. 473,827, dated April 26, 1892.

Application filed June 19, 1890. Serial No. 356,028. (No model.) Patented in France July 30, 1888, No. 192,109; in Belgium July 31, 1888, No. 82,748; in Switzerland May 8, 1890, No. 2,210; in England June 4, 1890, No. 8,672; in Spain July 17, 1890, No. 10,827, and in Austria-Hungary September 23, 1890, No. 23,033.

To all whom it may concern:

Be it known that I, LOUIS MARIE RENÉ DAUDETTEAU, of Vannes, (Morbihan,) in the Republic of France, have invented a Repeating-Firearm, of which the following is a specification.

My present invention consists of certain improvements in the construction of firearms, for which I have obtained Letters Patent in the United States No. 458,824, dated September 1, 1891; in France July 30, 1888, No. 192,109; in Belgium July 31, 1888, No. 82,748; in Austria-Hungary September 23, 1890, No. 23,033; in Spain July 17, 1890, No. 10,827; in Switzerland May 8, 1890, No. 2,210, and in England June 4, 1890, No. 8,672.

In the accompanying drawings, Figure 1 illustrates in side elevation a repeating and quick-firing gun according to this invention, showing the breech closed. Fig. 2 is a similar view showing the breech open. Fig. 3 represents the firearm in plan corresponding with Fig. 2. Fig. 4 represents in longitudinal section the breech mechanism and trigger-guard plate with the firing mechanism. Fig. 5 illustrates in elevation the receiver and trigger-guard plate separate from the stock, and with the operating-slide and breech-bolt removed. Fig. 6 represents a transverse section on the line 1 2, Fig. 4. Fig. 7 represents the cylinder or breech-bolt and firing-pin in several different views. Figs. 8, 9, and 10 are views of details. Fig. 11 is a side elevation; Fig. 12, a bottom view; Fig. 13, a side elevation looking in the opposite direction from Fig. 11. Fig. 14 is a plan, Fig. 15 a rear end view, and Fig. 16 a front end view, of the operating-lever.

The gun is composed of the following essential parts, namely: a breech-action comprising the receiver, the breech-bolt, the working slide or lever, the safety-bolt, the quick-firing lever, and other accessories, and a trigger-guard plate carrying the hammer-action of the firing mechanism.

The frame or receiver A is connected, Figs. 4 and 5, with the stock of wood and with the trigger-guard by screws V and v and with the barrel by a screw A'. It is further provided at the rear with a heel or

angle A², which bears against the wood, and at its lower part presents an opening at the rear for the play of the hammer. The barrel at the part nearest to the breech is incased in wood E, Figs. 1, 2, and 3, retained at one end by the circular flange or rib e' on the receiver and at the other end by a strap, so that the barrel can be grasped when shooting without danger of burning the hands. In the interior of the receiver there is provided on the left side a longitudinal groove a, Figs. 2, 4, 5, and 6, for the reception and guidance of the left-hand stud c on the movable breech-bolt. This groove terminates at its forward end in a transverse recess in the wall of the receiver, the rear wall of said recess affording a stop or support a', acting on this stud, while a stud c', arranged on the breech-bolt at the side opposite to the stud c, bears against the back face or support a² of the notch or recess, after the rotation of the movable breech-bolt when closed. This insures an effectual closing action, as the breech-bolt cannot be turned until the stud c' has passed the face a².

A vent o is formed on the right-hand side of the receiver, Figs. 1, 2, and 5, for the escape of gases which may have entered the breech-action in consequence of the accidental breakage of a cartridge-case. This vent, when the breech is closed, communicates with a corresponding vent o', Fig. 7, formed in the cupped end of the movable breech-bolt. With the same object an opening o² is formed in the rear of the left-hand wall of the breech-box, Figs. 2, 3, and 5.

The movable breech-bolt is in the form of a cylinder C, provided with two studs c and c', one being placed on the left-hand side and the other on the right-hand side of the bolt, a stop c³, and a propelling knob or projection d. The breech-bolt is further provided with an extractor e, fixed by a dovetail, and with a firing-pin t, Fig. 4, extending from one end of the breech-bolt to the other and which cannot be drawn out, except by first taking the bolt itself out of the receiver. The point of the firing-pin projects through the center of the hollow cup c², formed in the end of the bolt, and its head T is provided with two projections t' and

t^2 , the former t' serving to guide the firing-pin by working in a groove m^x in a projection m^2 in the cover-plate M^2 , hereinafter described, when the other projection t^2 is pushed out of the left-hand groove a in the receiver on the breech-bolt being drawn back by the action of the hand-lever, Fig. 6. The rear portion of the breech-bolt is provided with a notch t^3 , into which the projection t^4 on the head of the firing-pin enters when the breech is completely closed. The sides of the notch t^3 and the edges of the projection t^4 are formed with inclines. When the breech-bolt C is rotated, as hereinafter described, the firing-pin is prevented from doing so by the projections t' and t^2 being held in their respective grooves, and the inclined edges of the projection t^4 slide up the inclined sides of the notch, so as to cause the firing-pin to move backward relatively to the breech-bolt and to enable it to strike the cartridge when acted on by the hammer, as hereinafter described.

The operating-slide M is connected to the breech-bolt C, so as to move it by the knob d , being arranged on the right-hand side of the gun. It is composed of a metal bar M, Figs. 1, 2, 3, 6, and 11 to 16, sliding on lateral undercut tongues l on the receiver.

The lever is provided with a handle M' , which is grasped with the right hand, and is connected with a cover-plate M^2 , which is in the form of a curved shield, Fig. 6, covering the bolt and protecting it from dust and rain. This cover-plate M^2 is provided with a small rim m , Figs. 6, 12, 15, and 16, engaging with an external left-hand horizontal groove a^3 , Figs. 3 and 6, in the receiver and serving to prevent the lever from turning over, at the same time leaving it free to move or reciprocate horizontally, or back and forth. Underneath the cover-plate at the forward end there is formed a helical groove or cavity m' , Figs. 1, 2, 3, 4, 11, 12, and 13, in which engages the knob or projection d on the bolt in such a manner as to cause the bolt to move under the action of the slide or lever M and convert the rectilinear movement of the latter into a rotary motion of the former when the studs c and c' come opposite to their respective stops or supports a' and a^2 . The helical groove m' is formed with a small horizontal extension, which enables the lever, if necessary, to continue its movement after the breech is closed, this supplementary movement being utilized in quick firing for causing the firing mechanism to act automatically, substantially as described in my former application.

At the back part of the cover-plate there is an internal projection m^2 , having two functions—first, by means of the groove hereinbefore referred to it guides the projection t' on the head T of the firing-pin, and, secondly, by the action of its extremity it commences to cock the hammer B before the breech-bolt is carried back in opening the breech.

The bar M is provided at the front end with

a stop-screw u , Figs. 1, 2, 3, and 10, the point or end of which slides in the longitudinal groove l^x , formed between the two tongues l , and strikes against the head of the spring-stop U, Figs. 5 and 10, on the backward movement of the operating slide. This screw must be unscrewed in taking the action to pieces; but in putting the parts together the head of the spring U is depressed or yields when the bar M is pushed forward in order to engage it with the tongues. A notch l' in the rear part of the bar, Figs. 1, 2, 6, 11, and 12, allows the sear G to rise when the breech is perfectly closed, as hereinafter explained. This notch is followed by a projection m^3 with an inclined surface, which elevates the said sear in rapid firing. The anterior extremity of the bar M comes in contact with the quick-firing key, which limits its forward motion.

The quick-firing key is formed of a lever L, placed on the right side of the arm and pivoted on the receiver. It is capable of assuming two different positions, one backward on a stop 1 and the other forward on a stop 2. When in the former position, it limits the movement of the bar M in closing the breech; but in the latter position it presents the part x' , which is eccentric or depressed, to the said bar, and thus enables the latter to perform the supplementary movement, which enables it to act automatically through its projection m^3 upon the striking mechanism, as hereinafter described.

The safety-bolt U', Figs. 1, 3, 4, 6, 8, 9, and 10, is placed at the rear end and at the left-hand side of the receiver and rocks on an axis u^3 , parallel to the axis of the barrel. When thrown outward, Figs. 3, 6, 8, and 9, the bolt is actuated without difficulty; but when it is thrown inward, on the contrary, it interposes itself, Fig. 1, between the hammer B and the extremity of the covering-plate M^2 , so that the hammer cannot come into contact with the head T of the firing-pin, and, on the other hand, it is rendered impossible to open the breech. This latter position is to be retained, except when the firearm is to be discharged. A flat or blade spring u' , Figs. 3, 8, and 10, retains this bolt in either position, and by means of a projection u^2 , protruding into the interior of the receiver, serves at the same time to eject or flip out the extracted cartridge-shells. The ejector u^2 renders it necessary to provide a groove r in the breech-bolt C, Fig. 7.

The trigger-guard plate is provided at the rear portion with the firing mechanism, which comprises a hammer B, Figs. 4, 5, and 6, actuated by a mainspring R, a sear-nose G' , acted upon by a spring r' , a sear G, and a trigger D. The sear G oscillates on a center x and is provided with three arms or projections g' , g^2 , g^3 . The sear-nose G' is independent of the sear G, and engages in a notch in the hammer B to retain the hammer in its cocked position. When the sear G is raised, the projection g' , which is under

the rear end of the sear-nose, disengages the sear-nose from the hammer. The external arm g^2 is pressed upon by the operating-slide M to hold the sear G down until the arm g^2 can enter the notch l' on the slide M. The notch l' is placed at such a part of the slide M that the moment when this entry can take place corresponds exactly with the closing of the breech, and as the trigger D acts through the projection g' to move the sear-nose it will be impossible to fire the gun before the breech is absolutely and completely closed. The arm g^3 engages with the hammer B to raise the hammer for the purposes hereinafter explained. In Fig. 5 the arm g^2 is shown as under the hammer at the rear of its pivoting-point.

The sear G may be raised in two ways, either in the ordinary manner by pulling on the trigger, which presses up the projection g' , or by means of the projection m^3 on the slide M, Figs. 1, 2, 3, and 10, which by its incline passes under the arm g^2 and raises the sear, when the gun is adjusted for quick automatic or repeating firing, and the slide M is able to move farther after the breech is closed, as hereinbefore explained. The spring R is so arranged that when the hammer B is cocked the spring presses against the hammer at a point which tends to throw the hammer back instead of forward. Consequently the bolt C, after completely cocking the hammer, can be pushed forward without difficulty and the gun cannot go off until the action of the sear G has placed the hammer, as hereinafter explained, in a position in which the spring R can act upon it to throw it forward, and this action of the sear cannot take place until the sear is raised, which cannot take place until the breech has been perfectly closed. At the first movement of the sear G the arm g^3 presses up the hammer B and slightly raising it places it first in the dead-point or neutral position in which it has no tendency to move in either direction, and then moving it still further places it in a position in which the spring R is able to throw it forward sharply and cause it to strike the firing-pin. It is to be observed that in the first period of its movement the sear disengages the sear-nose from its notch, this sear-nose being provided simply for safety and may even be dispensed with, if desired. The first part of the movement is rendered perceptible to the finger in firing by hand by means of a small recess into which the nose d' of the trigger D falls. The marksman then knows that from this moment it requires only a minimum of effort to fire the gun and great precision in aiming results. The firing when loading by hand is more or less rapid, according as the release of the hammer B is produced by the slide M or by the trigger D.

When the breech is closed, the studs c and c' bear against the supports a' a^2 , respectively. To open the breech, the working lever is pulled back by the handle M' , and the breech-bolt

C is rotated by means of the knob d in the helical groove m' in the working lever until the studs c and c' are free to move back in the groove a . At the same time the outer extremity of the projection m^2 on the cover-plate M begins to cock the hammer, the sear G is lowered by the plate M pressing down the arm g^2 , and the firing-pin, not being able to rotate with the breech-bolt, because of the projection t' on its head T being held in the groove in the part m^2 , moves back and the projection t^4 rides out of the notch t^3 by the aid of the inclined sides and places itself between the head T and the end of the bolt C to prevent the pin returning until the breech is closed. The lever and bolt are then drawn back, cocking the hammer, and the ejector e , catching the upper rim of the end of the cartridge-shell, expels the shell. A new cartridge is then placed in the gun and the handle M' pushed forward, returning the breech-bolt and closing the breech.

I claim as my invention—

1. In a breech-loading firearm, the combination of a receiver provided with a groove a^3 , and a breech-bolt, with an operating-lever M, having a curved plate to cover the bolt, the said plate provided with a rim m to engage in the groove a^3 , substantially as and for the purpose set forth.

2. In a breech-loading firearm, the combination of a receiver, a breech-bolt having a firing-pin, and a hammer therefor, with an operating-lever M, engaging with the breech-bolt and provided with a cover-plate M^2 , a projection m^2 on the under side of the cover-plate to cock the hammer, and a groove in the projection, and a projection on the firing-pin adapted to enter the said groove to guide the firing-pin, all substantially as set forth.

3. In a breech-loading firearm, the combination of a receiver carrying the breech-bolt and provided with an external groove l^x , and a spring in the groove provided with a head, with an operating-lever provided with a screw u , projecting into the said groove and adapted to strike against the head on the spring to limit the backward movement of the lever, all substantially in the manner and for the purposes set forth.

4. In a breech-loading firearm, the combination of a receiver, and a breech-bolt having a firing-pin therein, with an operating-lever M, a hammer B, and a spring-controlled safety-bolt pivoted to the receiver and capable of being sprung between the hammer and the firing-pin, as and for the purposes set forth.

5. In a firearm, the firing mechanism consisting of a trigger, a hammer, a spring to act upon the hammer, a pivoted sear-nose engaging in a notch in the hammer, a pivoted sear provided with three projections, one g' between the sear-nose and the trigger adapted to be acted upon by the trigger and engage with the sear-nose, another g^2 , acted upon by a moving part of the gun to control the movement of the sear, and the last g^3 to engage

with the hammer, all substantially in the manner and for the purposes specified.

6. In a breech-loading gun, the combination of a receiver provided with a groove a , and a
5 movable breech-bolt having a notch t^3 , with inclined edges, a firing-pin in the breech-bolt provided with a head having a projection t^4 with inclined edges to engage with the notch t^3 , a projection t^2 to engage in the groove a ,
10 and a projection t' , with an operating-lever having a groove m^x , in which the projection

t' is guided after the projection t^2 leaves the groove in the receiver, substantially as and for the purpose set forth.

In testimony whereof I have signed my
15 name to this specification in the presence of two subscribing witnesses.

LOUIS MARIE RENÉ DAUDETTEAU.

Witnesses:

LÉON FRANEKENZ,

J. L. RATHBONE.