

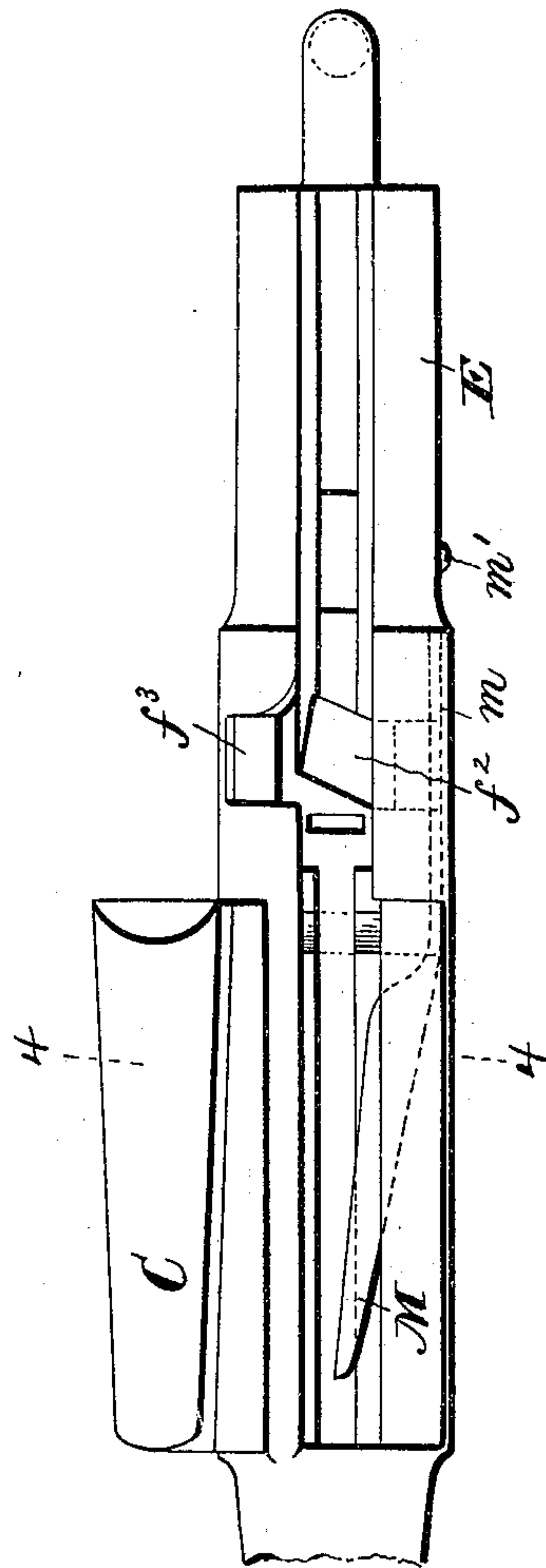
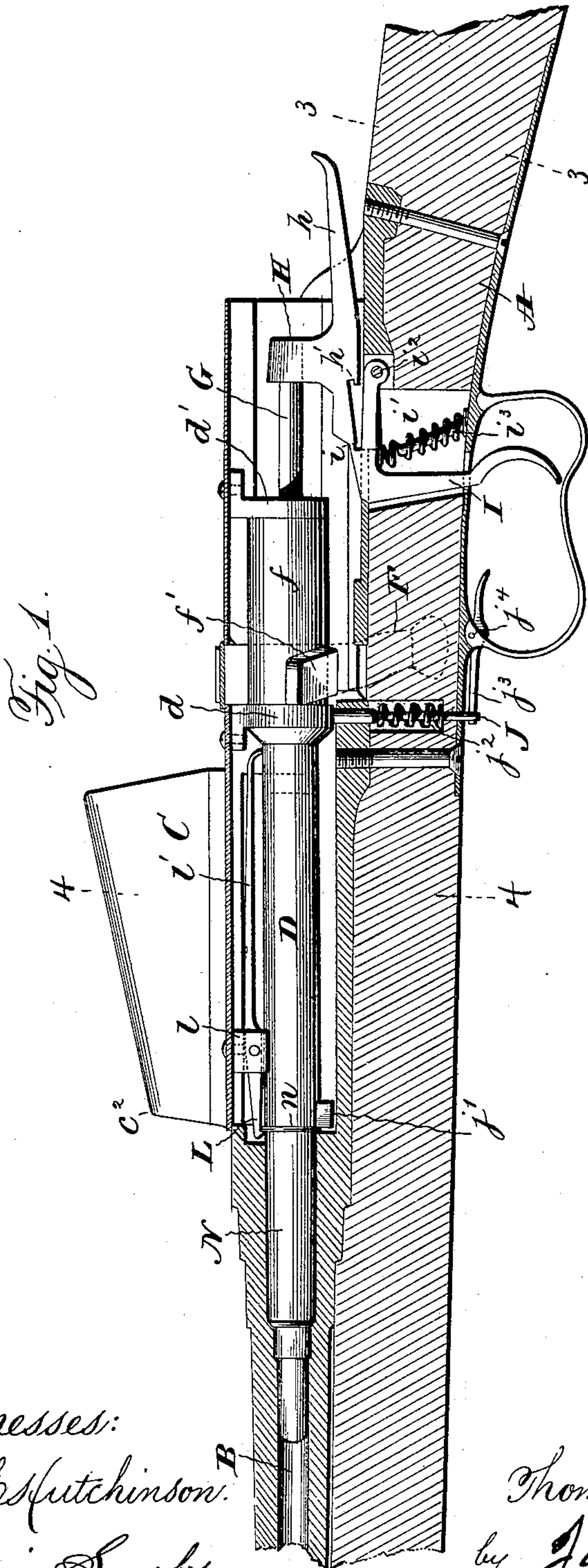
(No Model.)

2 Sheets—Sheet 1.

T. R. R. ASHTON.  
MAGAZINE FIREARM.

No. 597,935.

Patented Jan. 25, 1898.



Witnesses:  
Jas. E. Hutchinson.  
Fennie Sundry.

Inventor.  
Thomas Robert Raney Ashton,  
by James L. Norris.  
Attorney.

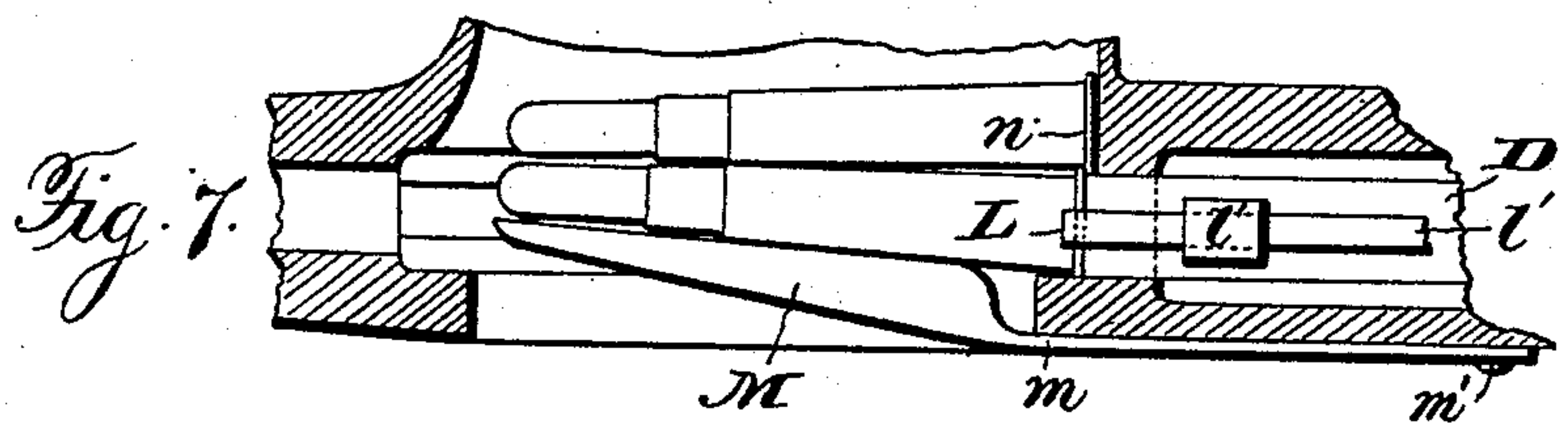
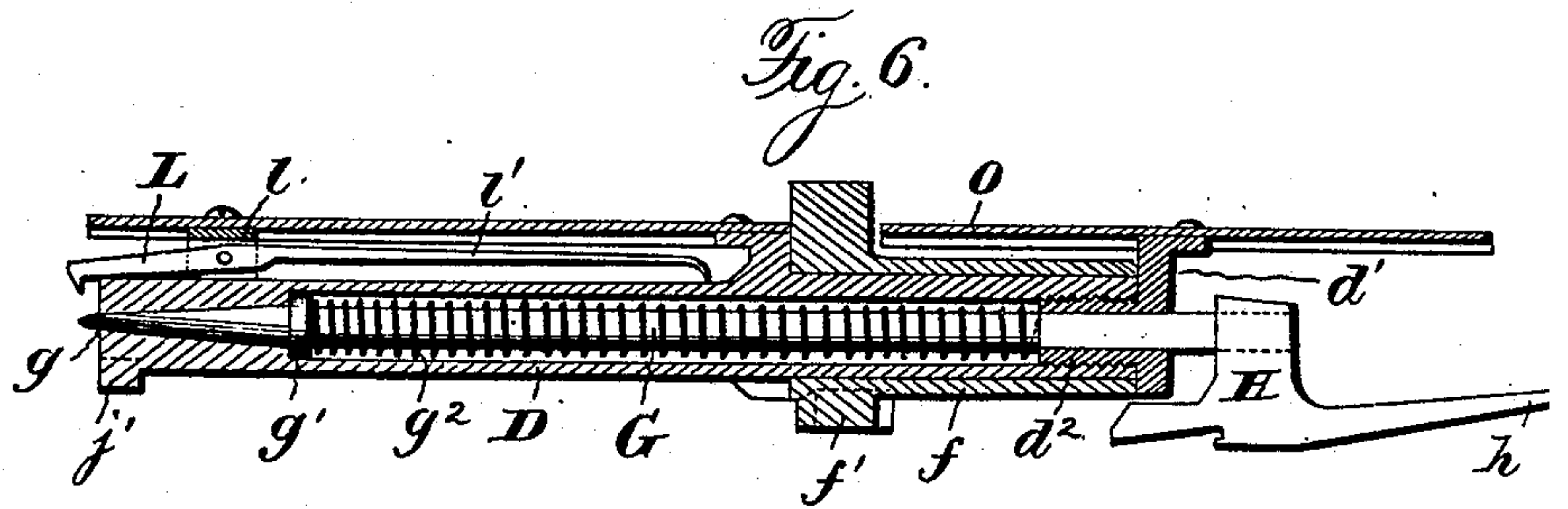
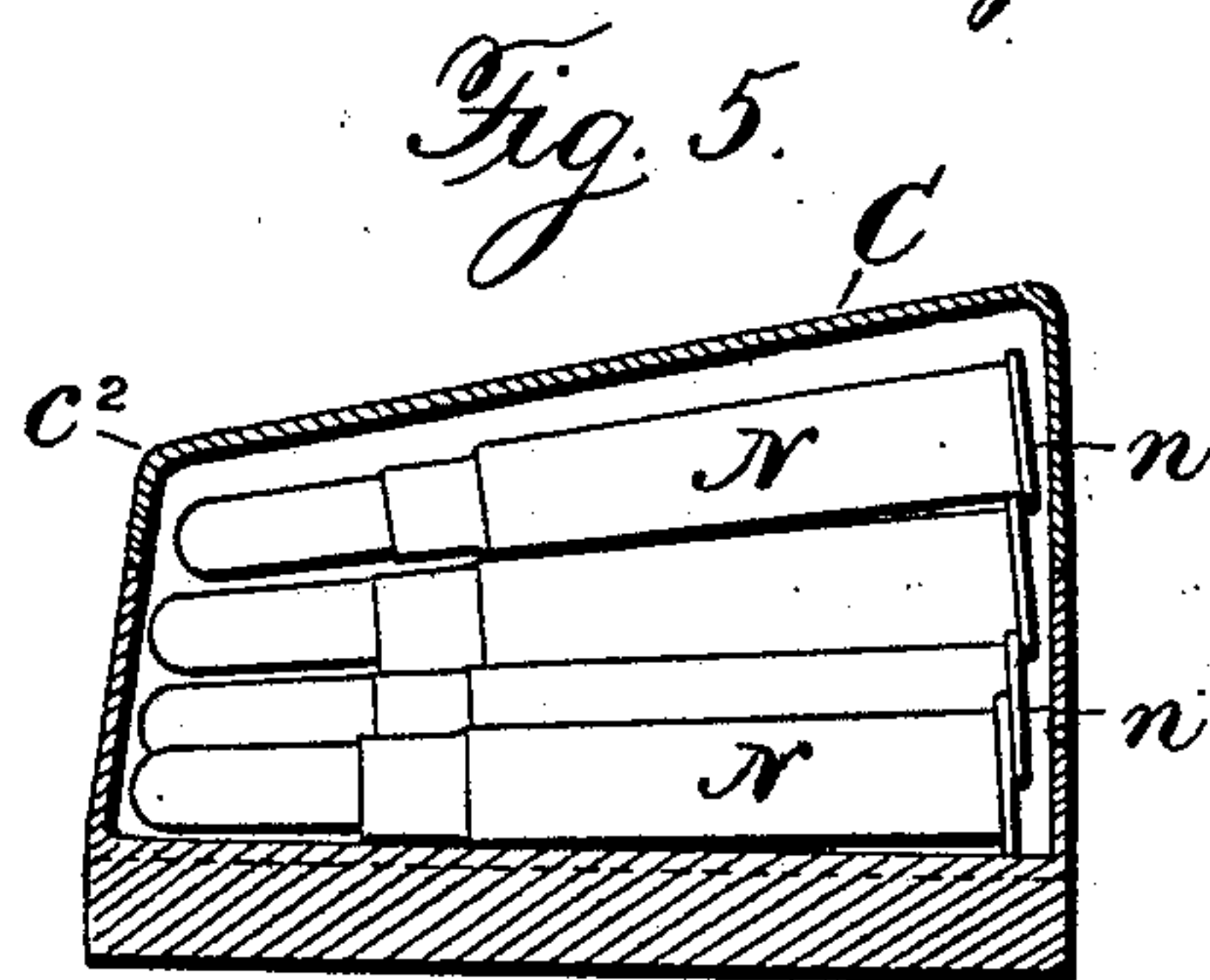
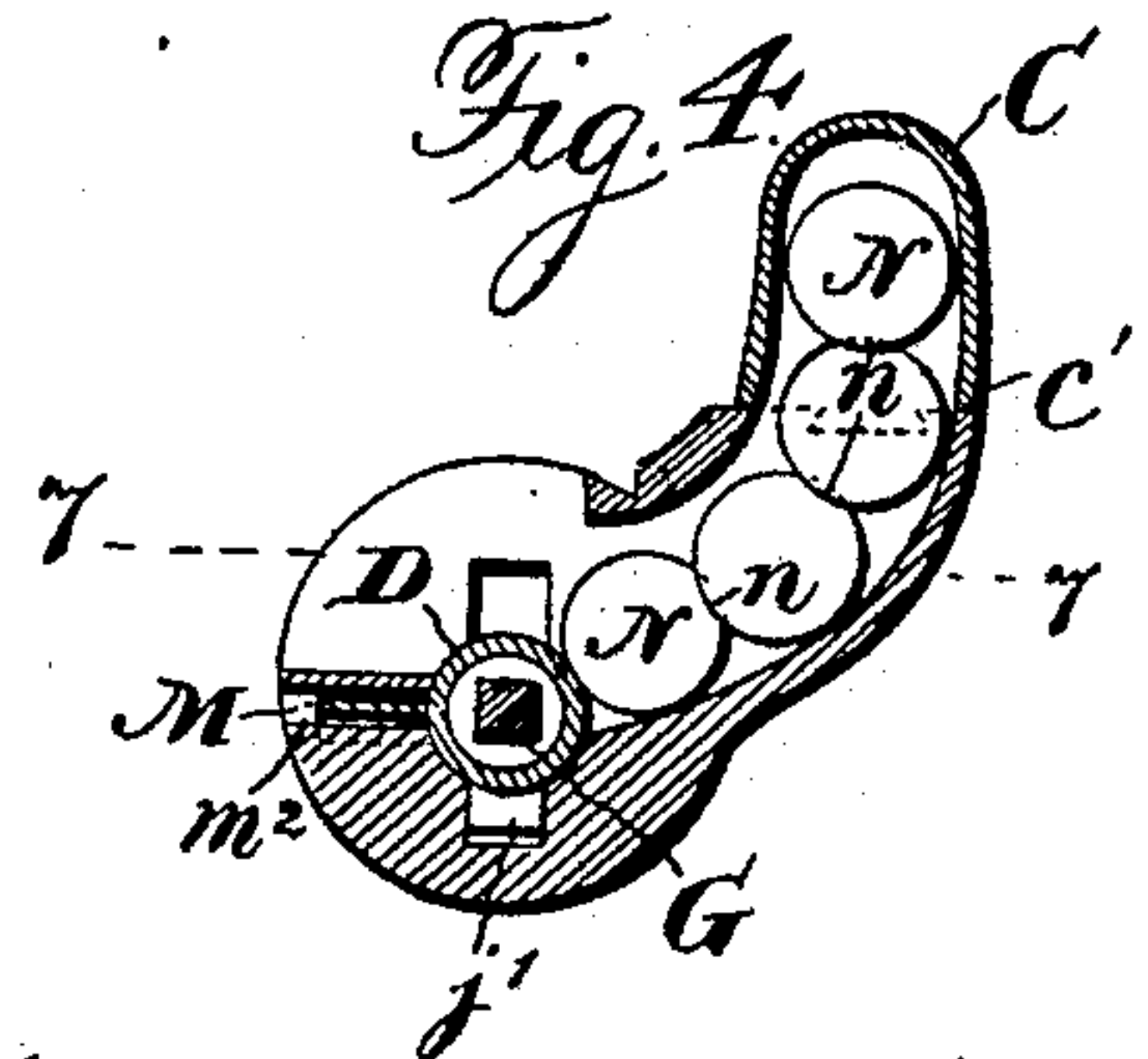
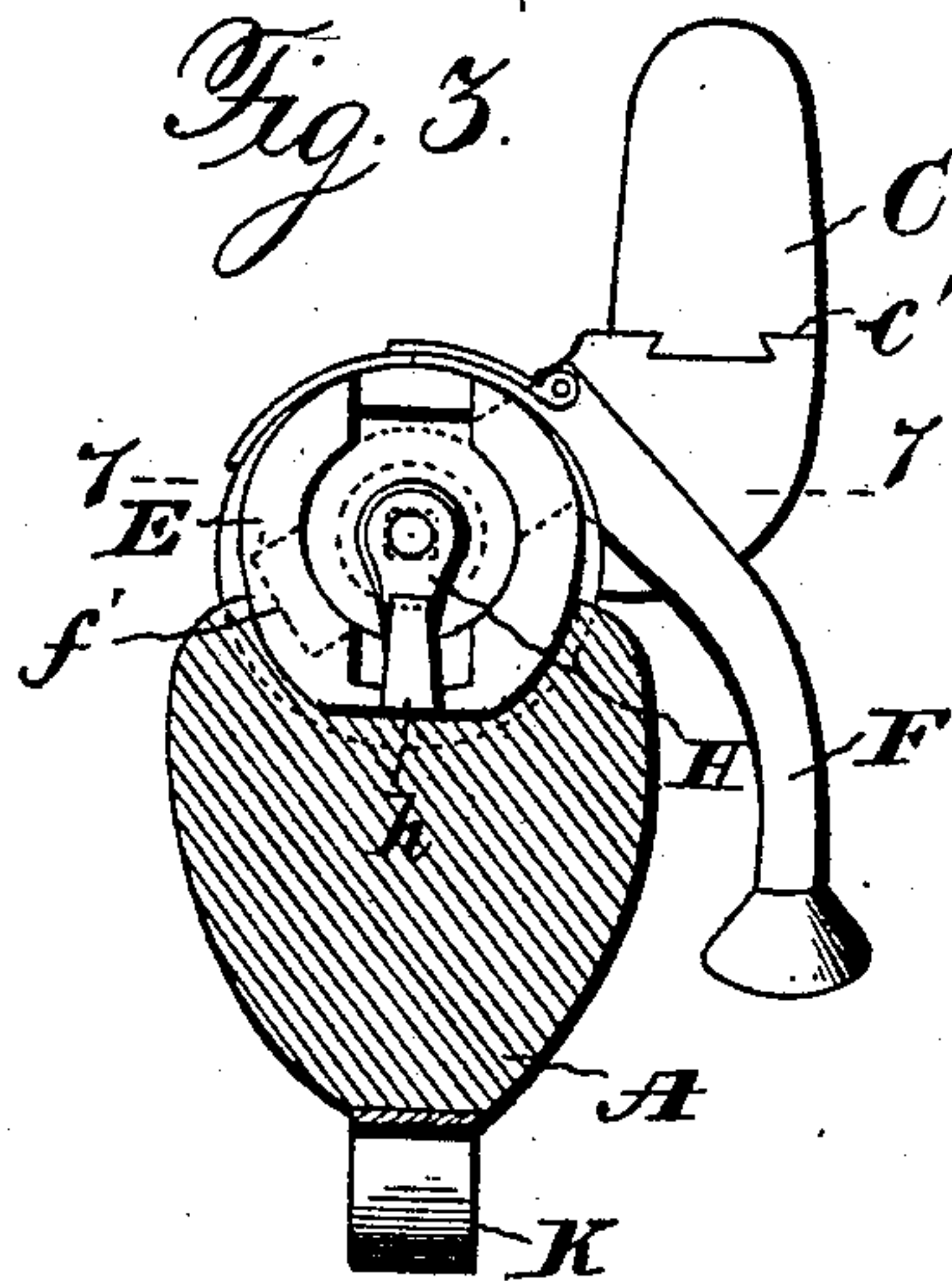
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Patented Jan. 25, 18



Witnesses:  
Jas. Hutchinson.  
Hemie Cumbly.

Inventor.  
Thomas Robert Raney &  
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at



# UNITED STATES PATENT OFFICE.

THOMAS ROBERT RANEY ASHTON, OF NORTH DENILIQUN, NEW SOUTH WALES.

## MAGAZINE-FIREARM.

SPECIFICATION forming part of Letters Patent No. 597,935, dated January 25, 1898.

Application filed May 8, 1896. Serial No. 590,720. (No model.) Patented in England April 21, 1896, No. 8,408; in France April 29, 1896, No. 255,967; in Switzerland April 29, 1896, No. 12,093; in Belgium April 29, 1896, No. 121,111; in Hungary May 9, 1896, No. 6,802, and in Austria July 29, 1896, No. 46/3,043.

*To all whom it may concern:*

Be it known that I, THOMAS ROBERT RANEY ASHTON, mechanical engineer, a subject of the Queen of Great Britain, residing at North Deniliquin, in the British Colony of New South Wales, have invented an Improved Magazine-Rifle, (for which I have obtained Letters Patent in Great Britain, No. 8,408, dated April 21, 1896; in France, No. 255,967, dated April 29, 1896; in Hungary, No. 6,802, dated May 9, 1896; in Austria, No. 46/3,043, dated July 29, 1896; in Switzerland, No. 12,093, dated April 29, 1896, and in Belgium, No. 121,111, dated April 29, 1896,) of which the following is a specification.

This invention relates to magazine-rifles constructed on the bolt system; and its main object is to provide a magazine-rifle especially adapted for military service, and in which, therefore, simplicity must be the chief point.

From the description and drawings herein-after referred to it will be seen that the various parts of the breech-action are much simplified and the number of parts reduced to a minimum, so that the weapon is not likely to get out of order, while the perfectly automatic action of the feed from the magazine and the ease with which the magazine (which is permanently secured to the rifle) may be replenished render a quicker rate of firing possible than has heretofore been attained even with the most approved patterns of magazine-rifles.

In order that my invention may be easily understood, I will describe it by reference to the accompanying drawings, wherein—

Figure 1 is a central longitudinal section of a magazine-rifle constructed according to my invention. Fig. 2 is a plan of the receiver of said rifle removed from the stock and barrel. Fig. 3 is a vertical transverse section on line 3 3, Fig. 1, showing the rear end of the receiver in elevation. Fig. 4 is a vertical transverse section on line 4 4, Figs. 1 and 2. Fig. 5 is a central longitudinal section of the magazine, showing the cartridges in position; while Fig. 6 is a central longitudinal section through the bolt of the rifle, and Fig. 7 is a horizontal

section through the receiver and lower end of the magazine on line 7 7, Figs. 3 and 4.

The same letters of reference indicate the same parts in all the figures.

A represents the stock; B, the barrel of the rifle; C, the magazine for containing four cartridges, and D the bolt, which is adapted to be slid to and fro within the receiver E by means of the locking-lever F, which projects from a sleeve *f*, mounted upon said bolt D, while G represents the firing-pin, which passes through the center of the bolt D and projects through an opening *g* in the forward end thereof, as clearly illustrated in Fig. 6.

H is a cocking-head attached to the rear end of the firing-pin G and is adapted to be engaged by the trigger I when said pin is in either its cocked or half-cocked position, and J represents a vertically-sliding spring-retaining pin, which normally projects up into the receiver and prevents the bolt D being entirely withdrawn therefrom by engaging with a small lug *j'* on the under side of the forward end of said bolt. This vertically-sliding retaining-pin J is fitted with a spring *j*<sup>2</sup>, whose tendency is to always keep it in its raised position, and it is connected to a small lever *j*<sup>3</sup>, which may be pivoted, as indicated at *j*<sup>4</sup>, on any convenient part of the trigger-guard K, so that said retaining-pin can be drawn down out of the path of the lug *j'* when it is required to entirely withdraw the bolt D from the receiver.

L represents the extractor, which is mounted upon the forward end of the bolt D and is adapted to engage with the rim of the cartridge when the bolt is pushed home, so that when the bolt is withdrawn it will extract said cartridge.

M denotes a spring-stop and guide-piece which projects into the side of the receiver E opposite to the magazine and which allows only one cartridge at a time to fall out of said magazine, and also acts as a guide while said cartridge is being moved into the barrel by the bolt.

The magazine C is, according to my invention, made integral with the receiver E and



is curved upwardly and outwardly from the right of said receiver, so as to be well out of the line of sight. Its upper portion may, if preferred, be made separate from the lower part, as indicated at  $c'$  in Figs. 3 and 4, and may be secured to said lower part or base by dovetailing or in any convenient manner.

The mouth or opening of the magazine C extends along its full length and opens into the interior of the receiver immediately behind the breech end of the barrel.

In order to load the rifle, it is merely necessary to draw back the bolt D and to hold the rifle on one side, so that the magazine C is inclined downwardly, when the cartridges can simply be dropped one by one into its mouth, when they will automatically arrange themselves in position therein, as shown in Fig. 5.

The forward end  $c^2$  of the magazine is inclined upwardly and rearwardly, so that the cartridges N will, when dropped into it, assume the position indicated in Fig. 5—that is, with the rim  $n$  of each cartridge behind the rim of the one below it. After filling the magazine a cartridge may be placed in the receiver and the rifle turned into its normal position, when the bolt D (which had previously been pulled back to its rearmost position in order to insert said cartridges) is forced forward, pushing the cartridge in the receiver into the barrel B ready for firing, as shown in Fig. 1.

The spring-stop and guide-piece M are preferably made in one piece and its spring portion  $m$  is secured to the side of the receiver by a screw or other convenient contrivance, as indicated at  $m'$  in Figs. 2 and 7. It projects through a slot  $m^2$  (see Fig. 4) in the side of the receiver and normally assumes the position indicated in Fig. 2, so as to allow the first or lowermost cartridge in the magazine to drop into such position in the receiver when the bolt is withdrawn that when the bolt is forced forward the bullet end of the cartridge will be directed into the barrel B, and said spring is of sufficient strength to prevent more than one cartridge falling into the receiver at once, though it is not of such a strength as to interfere with the forward movement of the cartridge and bolt, the former of which it serves to guide into the breech end of the barrel.

The bolt itself is constructed as illustrated in Figs. 1 and 6 and has a hole bored through it from end to end for the passage of the firing-pin G, and at the upper part of its forward end it is formed with an upwardly-projecting lug  $l$ , through which passes the extractor L and in which said extractor is pivoted.

The extractor L is made integral with a rearwardly-projecting flat steel spring  $l'$ , the rear end of which bears upon the bolt D and always tends to keep the hook-shaped end  $l^2$  of said extractor in its depressed position—that is, ready to engage with the rim of a cartridge. This construction of extractor hook and spring in one piece is simpler than those

now in use and is not liable to break or get out of order. A shoulder  $d$  is formed on the bolt D, and the sleeve  $f$ , carrying the locking-lever F, is mounted upon said bolt between said shoulder  $d$  and a flange  $d'$ , having a small projecting sleeve  $d^2$ , which is screwed into the rear end of the bolt D. The sleeve  $f$ , in addition to carrying the locking-lever F, has a lug  $f'$  projecting downwardly from it and adapted to project into an inclined recess  $f^2$  in the side and lower part of the receiver E. A recess  $f^3$  is formed in one side of the receiver E, opposite the inclined recess  $f^2$ , and the locking-lever F is adapted to engage said recess  $f^3$  when it is thrown down and lock the sleeve  $f$  against longitudinal movement.

O represents a shield which is secured upon the flange  $d'$ , shoulder  $d$ , and lug  $l$  of the bolt in order to effectually close in the top of the opening in the receiver. A shoulder  $g'$  is formed on the forward end of the firing-pin G, and behind said shoulder is the spiral main-spring  $g^2$ , which extends back to and bears against the sleeve  $d^2$  in the rear end of the bolt D and always tends to force the firing-pin into its forward position.

The cocking-head H on the end of the firing-pin is formed with a projecting tailpiece  $h$ , which allows the firing-pin to be moved slowly forward by hand if the trigger I be pulled down and allows said trigger to engage in a notch  $h'$ , cut for the purpose in the under side of said cocking-head, so as to hold the firing-pin in its half-cocked position. When in its full-cocked position, said trigger I engages with the forward end of the cocking-head, as indicated in Fig. 1. For this purpose the trigger I is formed with a sear  $i$  and is normally held in its raised position by the spiral trigger-spring  $i'$ , while the trigger itself is made in one piece in the form of a bell-crank lever and is fulcrumed upon the under side of the receiver, as indicated at  $i^2$  in Fig. 1. The spring  $i'$  is preferably coiled around an upwardly-projecting inclined pin  $i^3$ , which is riveted or otherwise secured at its lower end to the base of the trigger-guard K.

The spring and arrangement of the trigger as above described are exceedingly effective, although they are very simple, the whole of the trigger mechanism consisting merely of three parts.

The operation and manner of using my improved magazine-rifle are as follows: The bolt D having been withdrawn until the lug  $l'$  contacts with the spring-retaining pin J, the rifle is held so that its right-hand side is downward. Four cartridges are then dropped through the opening or mouth of the magazine and one into the receiver, after which the rifle is turned into its ordinary position and the bolt forced forward. The effect of this movement of the bolt will be to push the cartridge previously placed in the receiver into position in the barrel, as hereinbefore described, when the trigger will be cocked, because when the front end of the cocking-



head H comes in contact with the sear *i* on the trigger I it will be retained against further movement, the mainspring  $g^2$  meanwhile being compressed by continuing the forward movement of the bolt. When said bolt is home, the locking-lever F is turned down into engagement with a recess  $f^3$  in the side of the receiver E, and by the same movement the lug  $f'$  will be turned into the inclined slot or recess  $f^2$  in said receiver and the extractor L will have engaged with the rim of the cartridge in the barrel. The effect of pulling the trigger I will be to withdraw the sear *i* from in front of the cocking-head H, which will release the firing-pin G and admit of said pin being propelled forward by the mainspring  $g^2$ . When the rifle has been fired, the lever F is moved upwardly, thus rotating the sleeve *f* and moving the lug  $f'$  out of engagement with the recess  $f^2$  and at the same time moving said lever out of engagement with the recess  $f^3$ . The bolt D can then be drawn back, the effect of which will be to extract the spent cartridge. When the bolt has been drawn back nearly the full distance, the rim of the shell engages with a notch or recess cut in the inner side of the receiver a little more than the length of the cartridge from the breech end of the barrel, as indicated at *e* by dotted lines in Fig. 1 and full lines in Fig. 2, and the shell will be canted slightly as far as the barrel will allow and when completely retracted from the barrel will be ejected, owing to the resistance on one side of the rim (against the notch or recess in the receiver) and the backward pull on the other by the extractor. After the cartridge has been ejected a fresh cartridge will immediately fall by its own weight into the receiver and, as before, will be retained in its proper position (ready to be forced into the barrel) by the spring-stop and guide-piece M, the construction of the magazine being such as to prevent the cartridges becoming jammed in it.

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 the barrel and a cartridge-receiver in alignment therewith, of a magazine made integral with or permanently secured to the receiver, said magazine being entirely closed excepting at its bottom and projecting upwardly and outwardly from the receiver and having an opening in its lower end leading directly into one side of the receiver at the same level as the barrel, means for feeding the cartridges into the magazine through the receiver, and a yielding stop and guide projecting through the side of the receiver opposite the magazine-opening, substantially as described.

2. In a magazine-rifle, the combination with the barrel and a cartridge-receiver in alignment therewith, of a magazine projecting outwardly and upwardly from said receiver and having its forward end inclined upwardly and rearwardly to cause the rim of each cartridge to fall behind the rim of the cartridge next below means for feeding the cartridge into the magazine through the receiver, and a yielding stop and guide projecting into the receiver through the side of the latter opposite the magazine, substantially as described.

3. In a magazine-rifle, the combination with a receiver and a magazine curved upwardly and outwardly from the receiver and having an opening in its lower end leading directly into the receiver at the same level as the barrel, of a spring projecting into the receiver through a slot in the opposite side of the receiver, said spring operating to cause the cartridges to be fed one at a time to the receiver and to guide the cartridge into the barrel, substantially as described.

4. In a magazine-rifle, the combination with a receiver and a magazine communicating with the receiver at one side of the latter, of a spring projecting into the receiver through a slot in the opposite side of the receiver, substantially as described and for the purpose specified.

THOMAS ROBERT RANEY ASHTON.

Witnesses:

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PERCY THOMAS HEDGES.