

T. WILSON.
REVOLVING MAGAZINE GUN.

No. 481,452.

Patented Aug. 23, 1892.

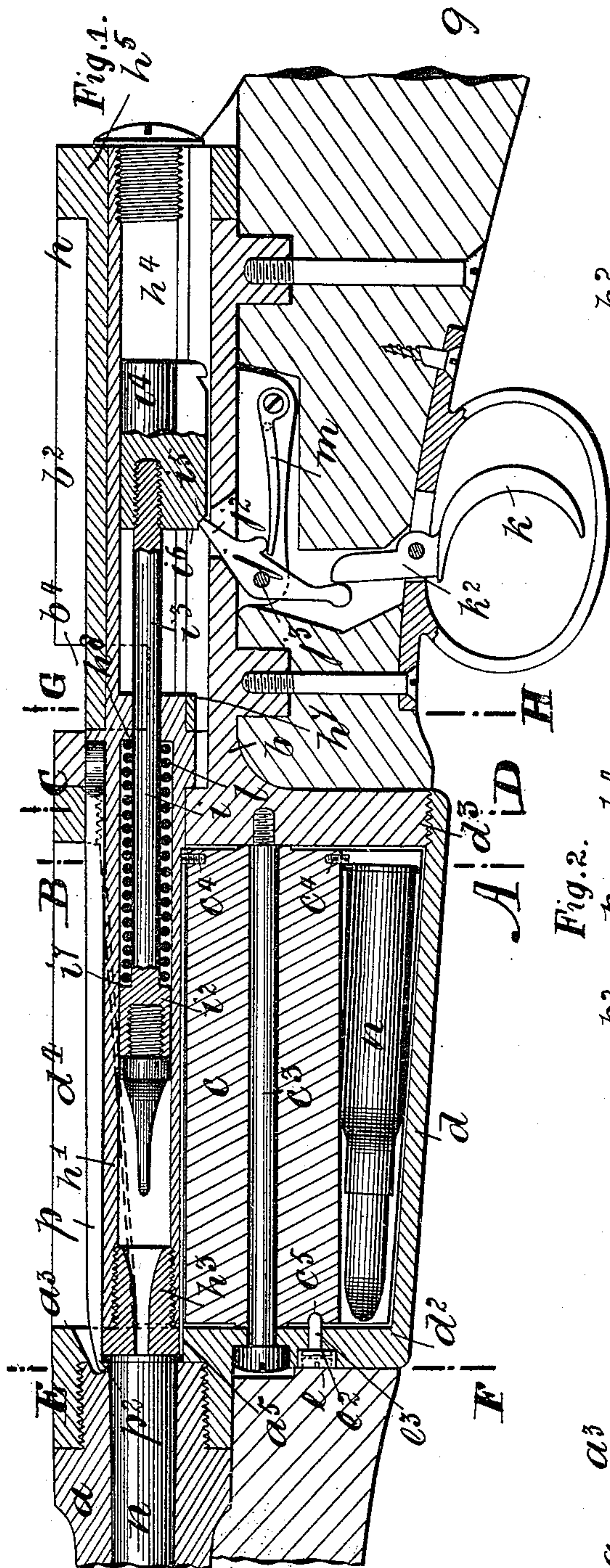


Fig. 1.

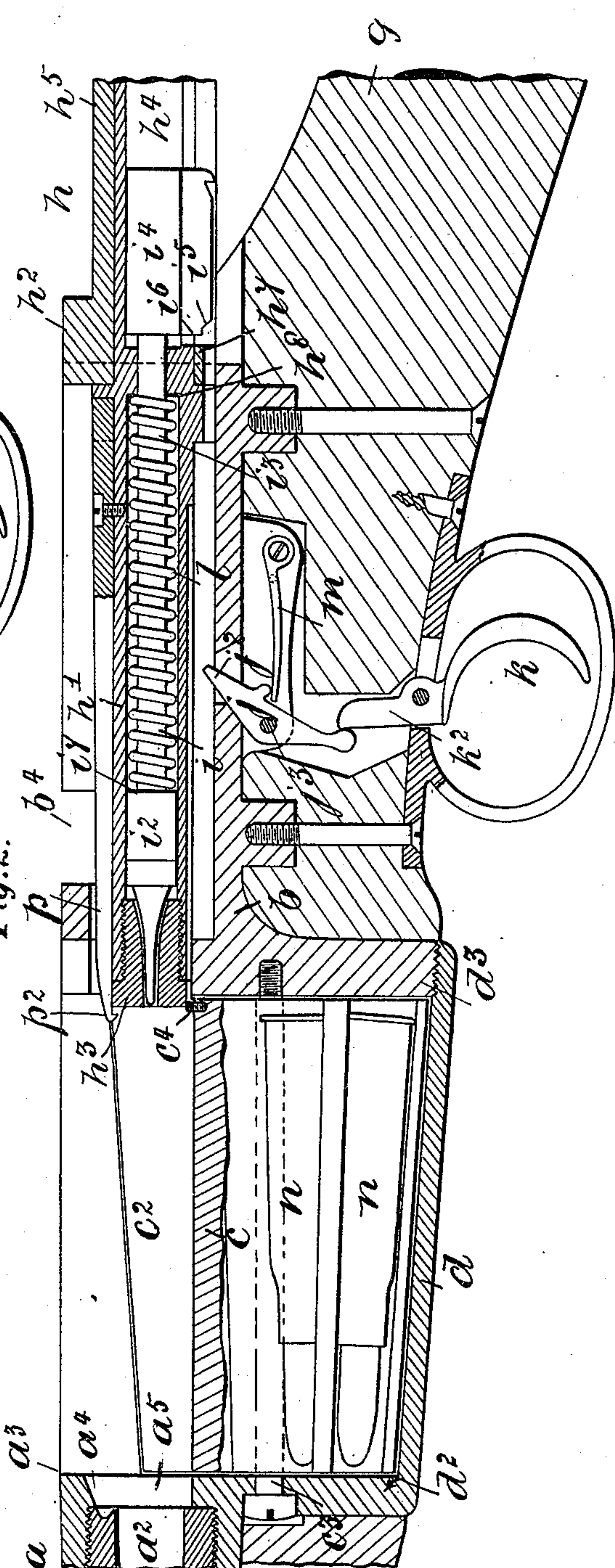


Fig. 2.

WITNESSES

Henry C. Kerrell
Arthur J. Sadler

INVENTOR

Thomas Wilson
by Counselors, etc.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

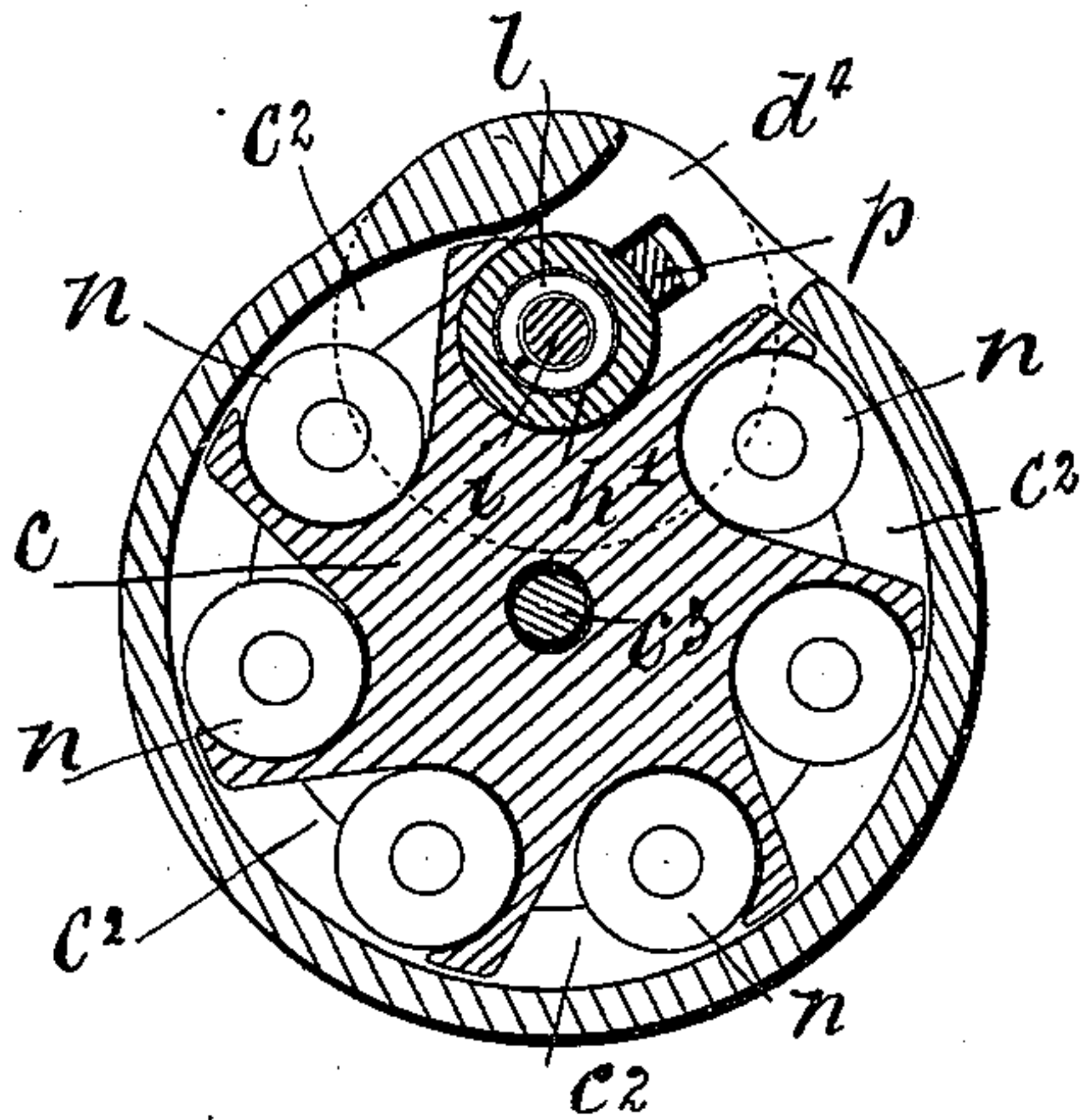


Fig.4.

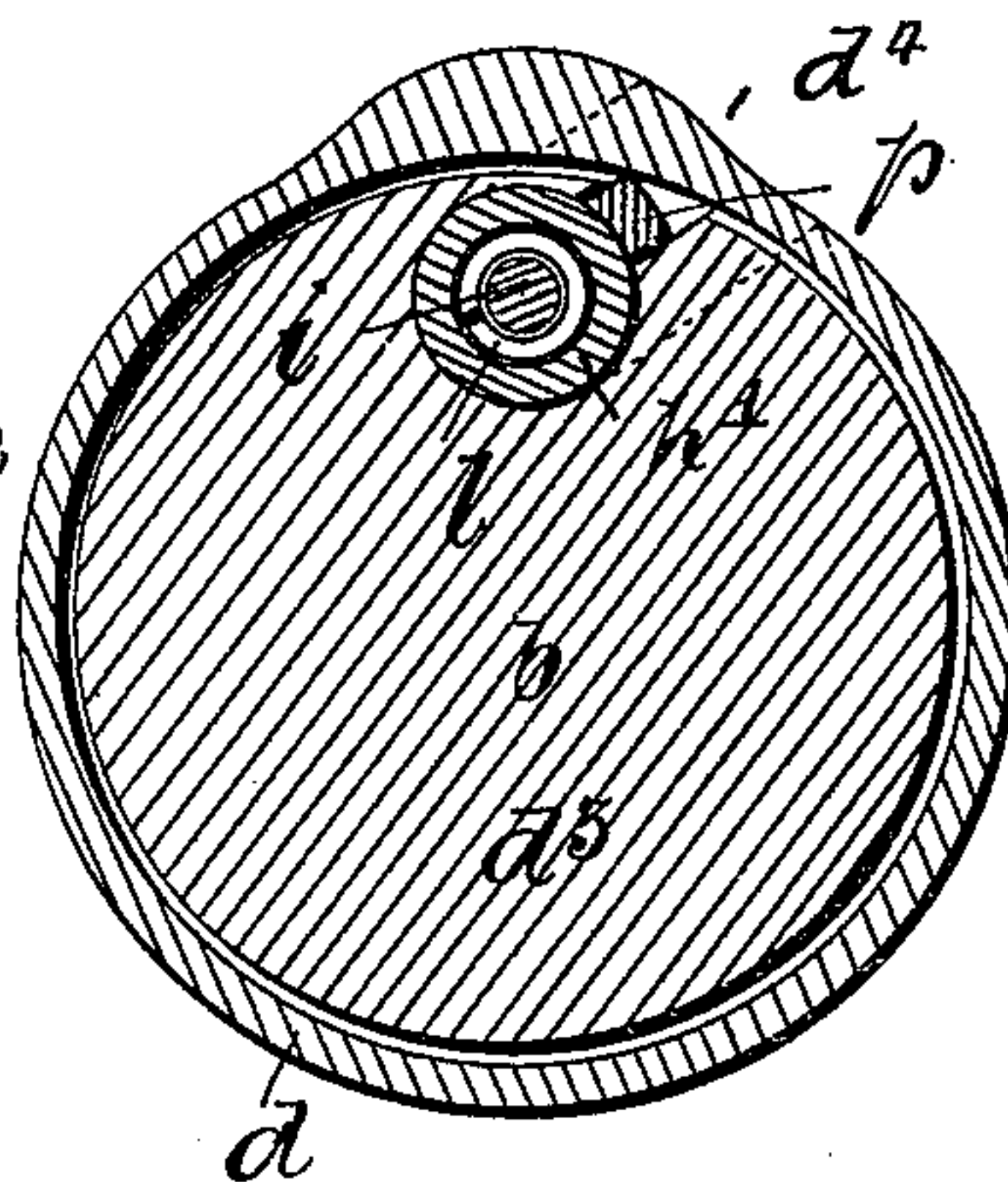


Fig. 5.

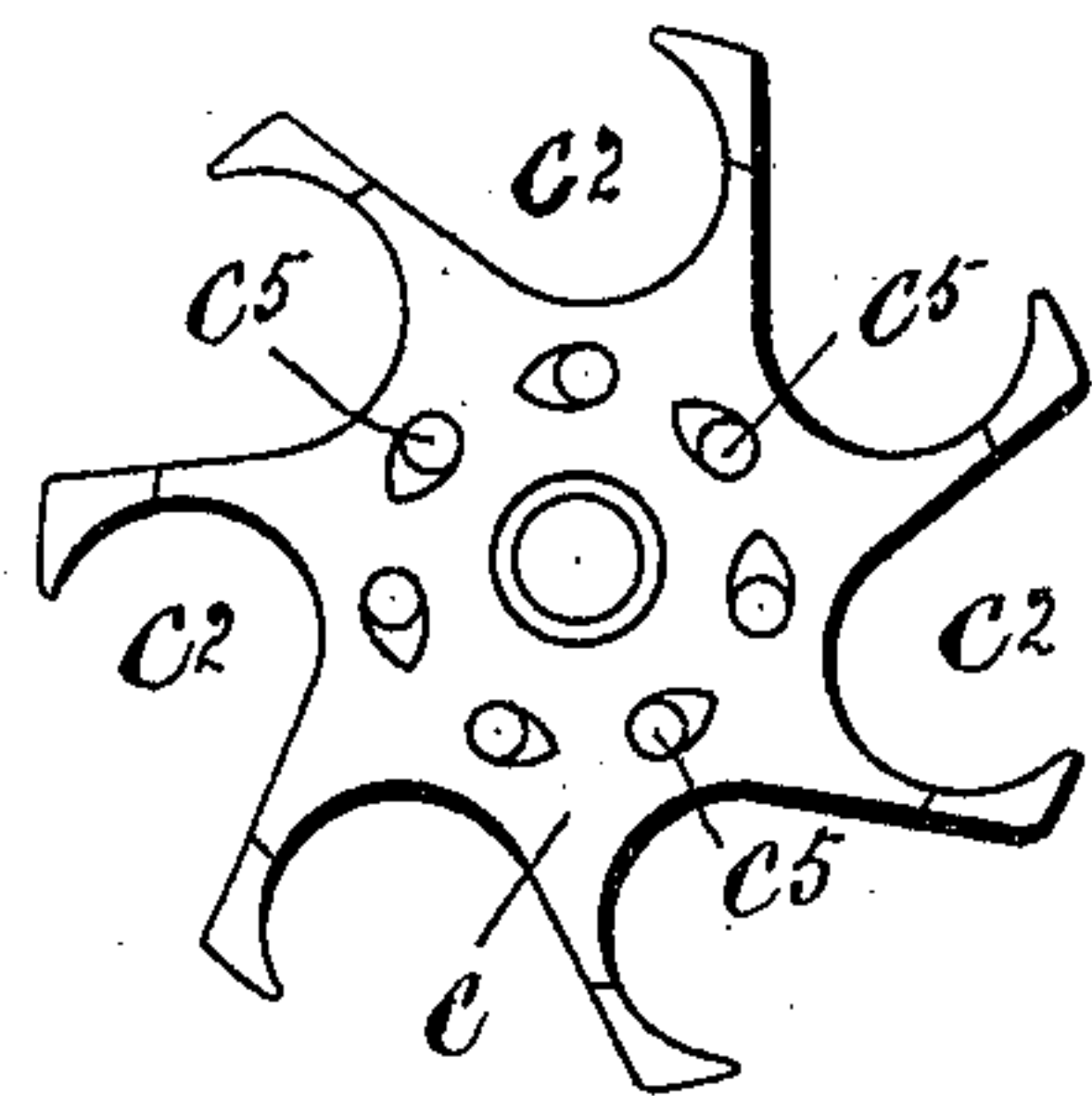


Fig. 8.

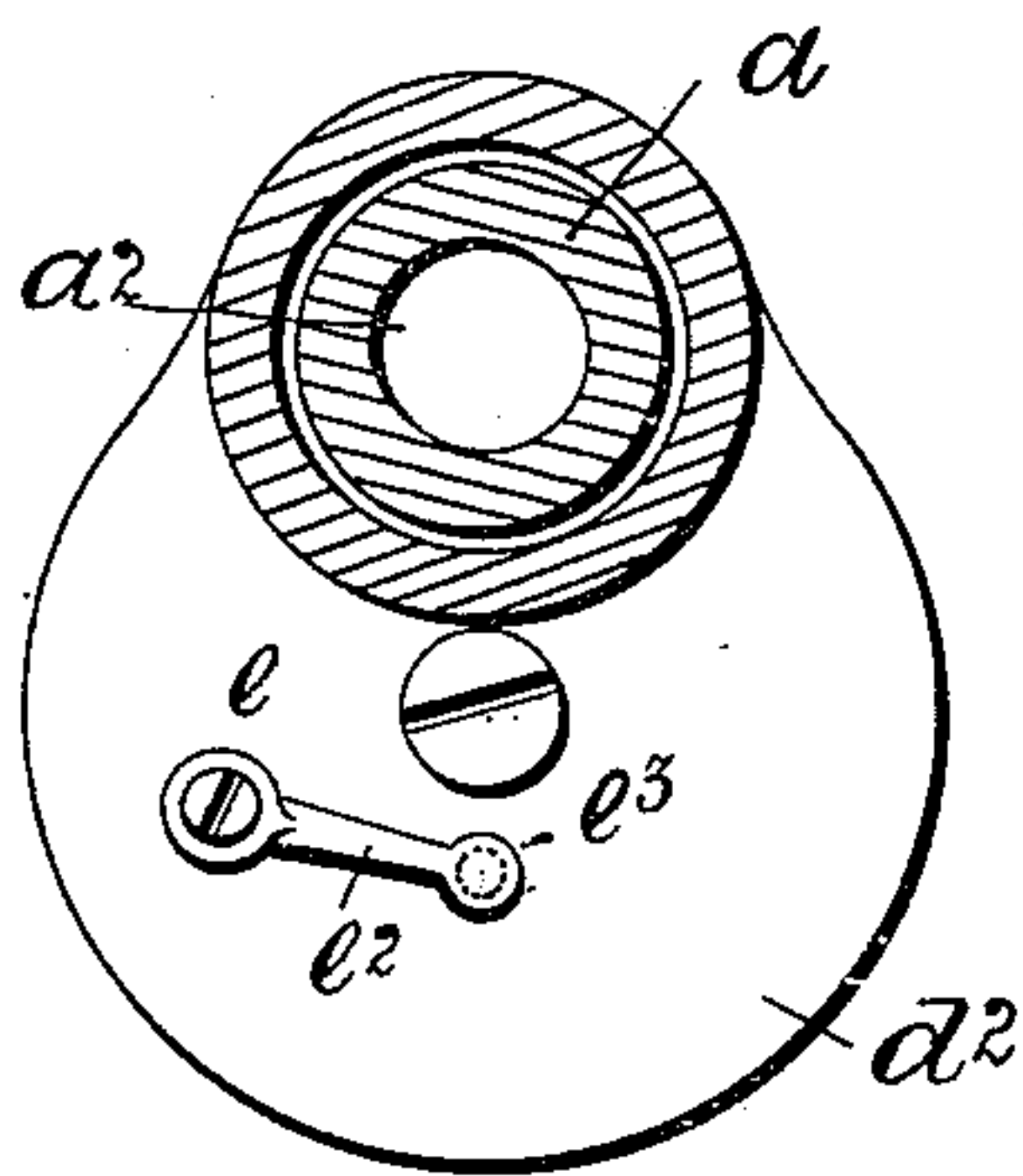


Fig. 6.

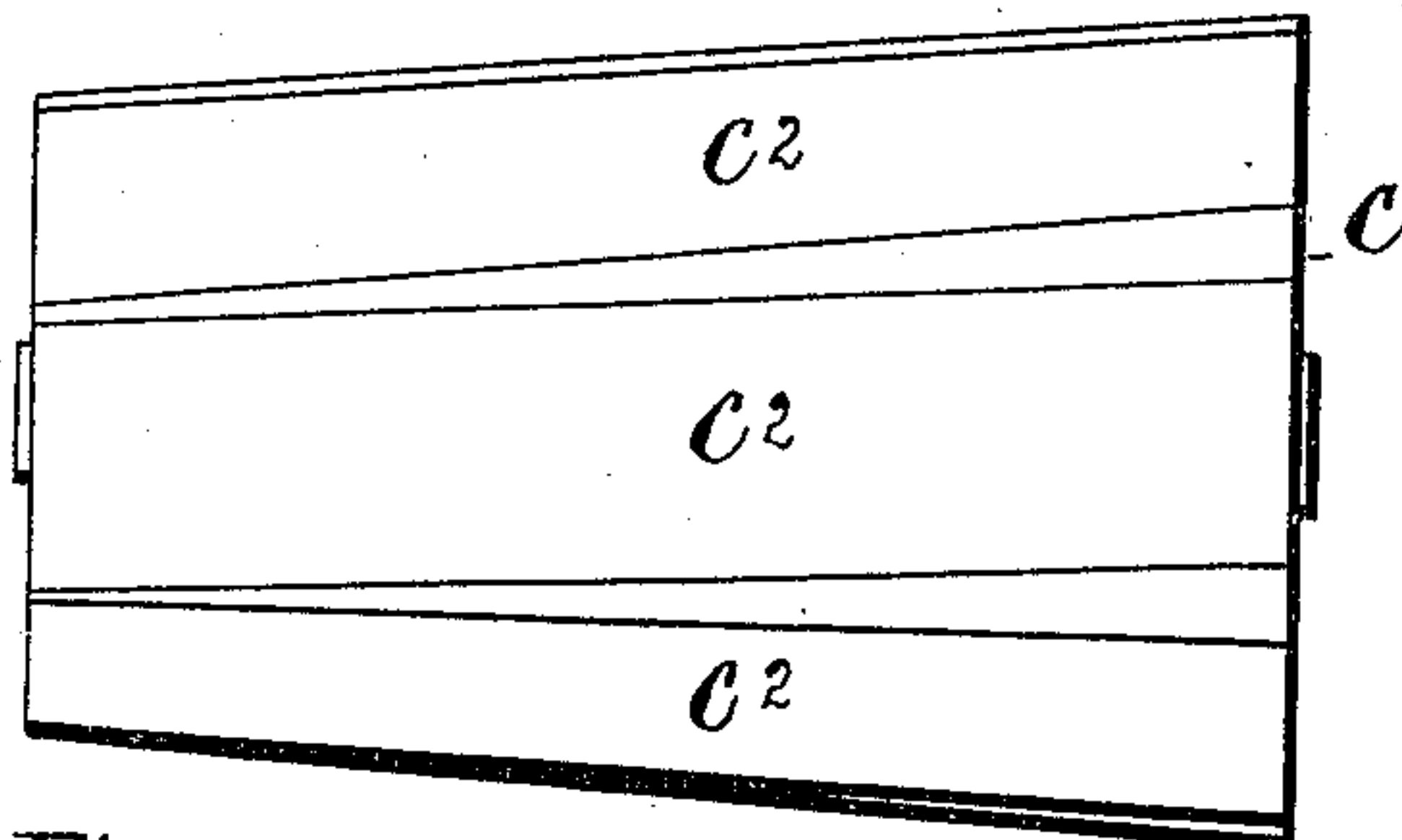


Fig. 9.

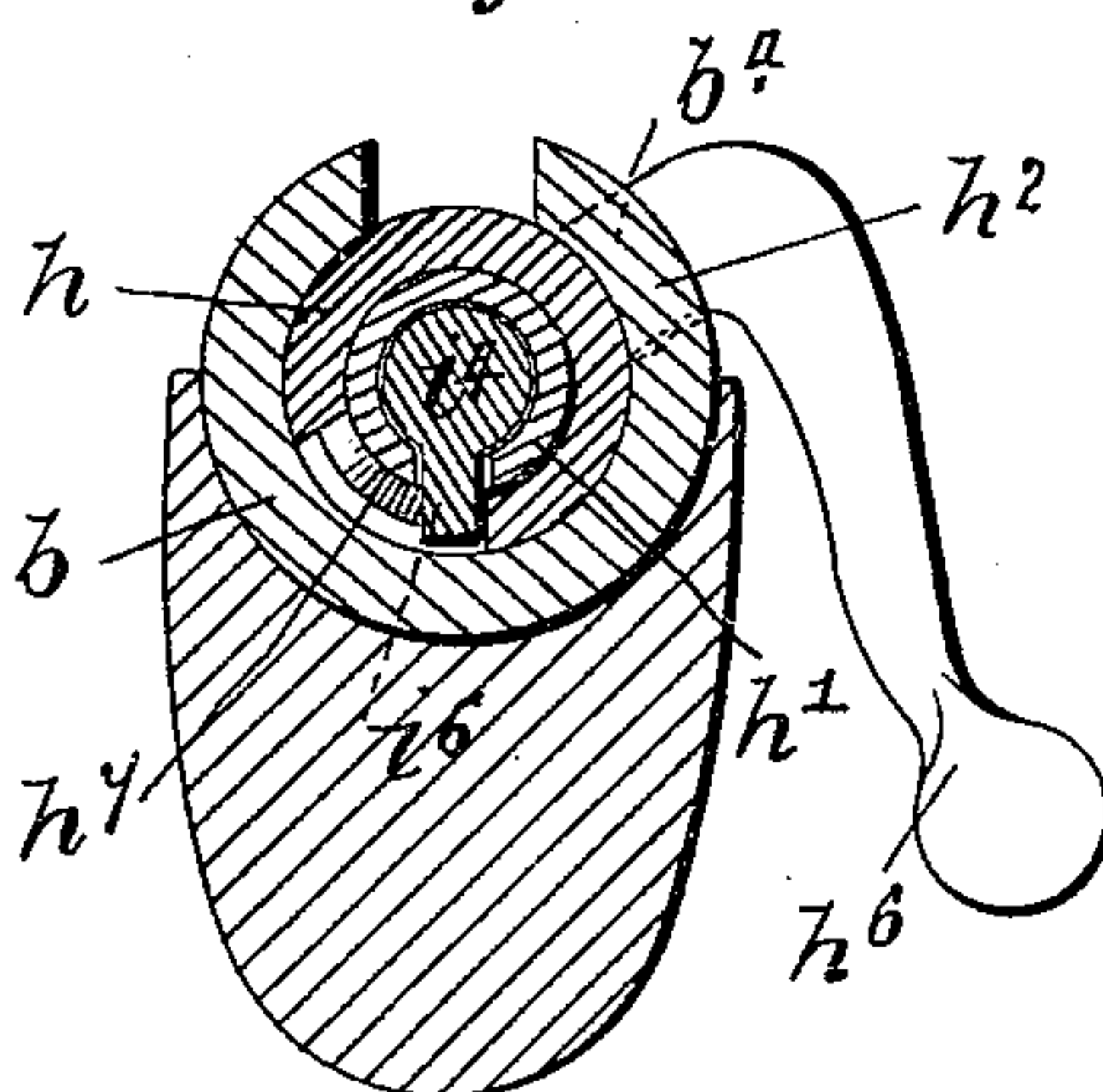


Fig. 10.

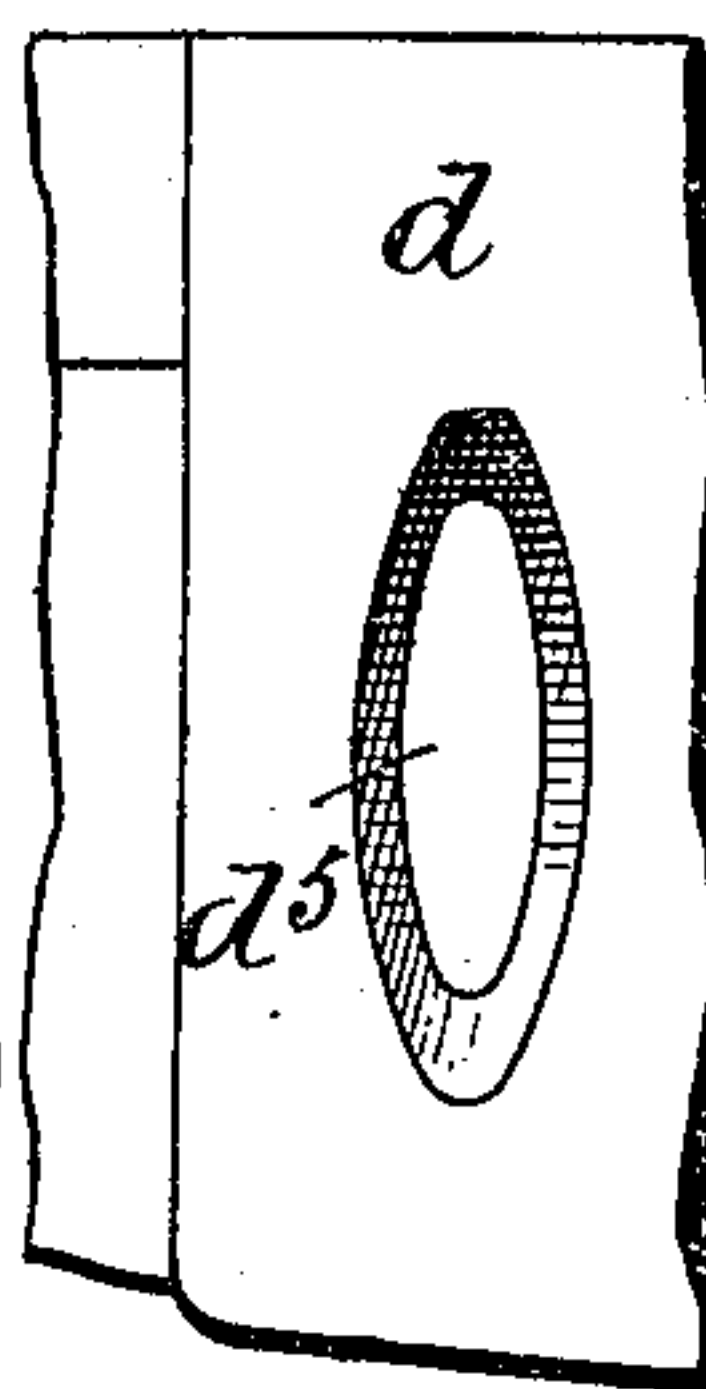
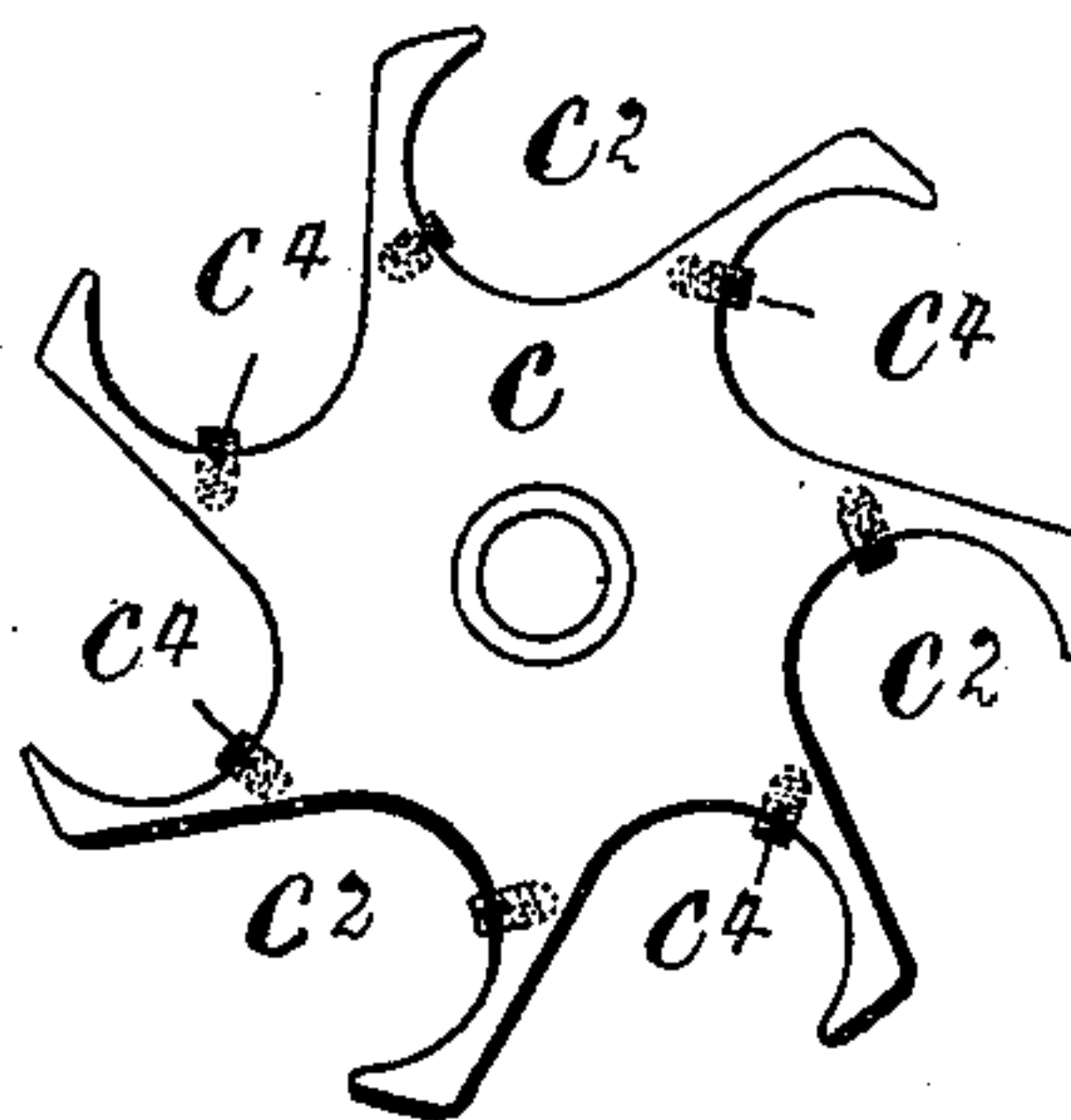


Fig. 7.



WITNESSES.

Henry Therrell
Arthur T. Sadler.

INVENTOR

Thomas Wilson
by Counselors Mrs. M. G.

UNITED STATES PATENT OFFICE.

THOMAS WILSON, OF BIRMINGHAM, ENGLAND.

REVOLVING MAGAZINE-GUN.

SPECIFICATION forming part of Letters Patent No. 481,452, dated August 23, 1892.

Application filed January 18, 1892. Serial No. 418,489. (No model.) Patented in England December 30, 1890, No. 21,171; in France October 27, 1891, No. 217,036; in Belgium November 8, 1891, No. 97,042, and in Germany January 7, 1892, No. 26,772.

To all whom it may concern:

Be it known that I, THOMAS WILSON, gentleman, a subject of the Queen of Great Britain, residing at Frederick Road, Edgbaston, in the city of Birmingham, England, have invented certain new and useful Improvements in Magazine Small-Arms, (for which I have received Letters Patent as follows: in Belgium November 3, 1891, No. 97,042; in France October 27, 1891, No. 217,036; in Germany January 7, 1892, No. 26,772, and in Great Britain December 30, 1890, No. 21,171;) and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to magazine breech-loading small-arms, as hereinafter described. Figure 1 of the accompanying drawings represents in longitudinal vertical section a magazine breech-loading rifle of the sliding-bolt type constructed and arranged according to my invention, the said magazine being hand-operated. The said arm consists, primarily, in combining with the breech-shoe and breech mechanism of the said bolt type a rotatory magazine consisting of a pivotally-centered chamber having open-ended channels running axially and peripherally from end to end of the same. The said view also shows the said arm closed and cocked ready for firing and with the cartridge placed home within the chamber of the barrel. The magazine of the said arm is hand-operated, or, in other words, has the necessary rotation given to it for bringing its channels or chambers consecutively coincident with the chamber of the barrel of the arm, as aforesaid. Fig. 2 represents the said arm open and with the sliding breech-bolt drawn back to its full extent, and through the intervention of which bolt the spent case is first started and then extracted from the chamber of the barrel and subsequently tilted and flirited through the open side of the chamber or corner of the magazine by the rim of the said cartridge coming against an outstanding end of a pin or stud located at the bottom of the front part of the said chamber and lying within the path of the said rim when the cartridge is extracted. Fig. 3 represents

a transverse section of the said arm through the dotted lines A B, Fig. 1, and looking from right to left. This said section shows how the magazine is located within an encircling or barrel cover disposed between the end of the barrel of the arm and the breech-shoe and how the chambers of the magazine when coincident with the axial line of the barrel form, as it were, a continuation of the said shoe wherein the sliding bolt traverses for pushing home the cartridge and extracting and tilting the same from the magazine. Fig. 4 represents a transverse section of the said arm upon the dotted lines C D, Fig. 1, and looking from right to left. Fig. 5 is a front end view of the magazine, showing the open ends of the chambers and the retaining-sinkings for holding the said magazine in predetermined positions on the same having imparted to it one-seventh of a rotation, or according to the number of its chambers, which are simply troughed carriers for consecutively taking the cartridges into position for being pushed home anterior to being fired. Fig. 6 is an elevation of the said magazine, showing its peripherally-tapered figure. Fig. 7 is a back end view of the magazine, showing the tilting-pins. Fig. 8 is a transverse section through the dotted lines E F, Fig. 1, looking from left to right, and showing the spring-arm catch, with the acting end of it passing through the front wall of the cover or casing and taking into one of the sunken holes for retaining the magazine in a predetermined position, as aforesaid. Fig. 9 represents a further cross-section of the said arm and upon the dotted lines G H, looking from right to left. Fig. 10 shows a portion of the cover or encircling jacket of the magazine, which has upon one or upon its two opposite sides holes or piercings wherethrough the thumb and finger of the user of the arm inwardly pass to partially rotate the magazine after each discharge for bringing the next chamber of the magazine, with its live cartridge, in a line with the race of the breech-shoe and the chamber of the barrel.

The same letters of reference indicate corresponding parts in Figs. 1 to 10.

a is the barrel of the arm, a^2 its chamber, and a^3 its breech end, with a recess or cut-

away part a^4 made within the top side of the entrance to the said chamber in order to admit of the slight rising of the hooked end of the extractor-limb, as hereinafter described, on the same passing over the edge of the rim of a cartridge pushed home.

b is the breech-shoe, having disposed between it and the said barrel a magazine c , consisting of a pivotally-centered carrier having open-ended chambers c^2 , running axially and peripherally from end to end of the same and wherein the reserve cartridges are placed and are brought consecutively in a line with the chamber or bore of the arm as the same are required, and which magazine is mounted upon a central axis c^3 , having its bearings in the ends d^2 d^3 of a chamber-inclosing cover d , which constitutes a covering-up jacket for the said chamber and forms a framing means of connection between the breech end and the rear part or shoe and stock of the arm. Each of the said chambers of the magazine has disposed at the bottom of its extreme rear ends tilting-pins c^4 , consisting of pins with their exposed ends standing above the plane of the bottom of the chambers, so that as the spent-cartridge cases are drawn along the said chambers by the extractor taking hold of their heads they are tilted by the lower parts of their rims coming in contact with the pins. Hence the sudden flirting from the chamber through a side opening d^4 of the cover d . The other or front end of the magazine has sinkings c^5 , wherein a spring-catch e (best seen in Figs. 5 and 8) takes for holding the said chambers in predetermined positions consequent upon one or other of the chambers coming linable with the axis of the barrel or breech-shoe. The said spring-catch consists of a spring-arm e^2 , having at its ends a stud e^3 , which takes into one or other of the seven sinkings c^5 on the latter coming opposite the former. The stud e^3 of the spring-arm of the said catch works through a hole through the front wall or end d^2 of the magazine-cover d .

b is the shoe of the arm, consisting of an open-topped channel b^2 , carried by the neck or rear of the stock g of the arm and with a side gap b^4 made within it, wherein a lug h^2 of the sleeve h^5 of a bolt h takes on the handle of the bolt, as hereinafter described, being turned down, as represented in Figs. 1 and 9. This said shoe is in the same axial line as the barrel and is adapted to carry within its hollow interior the said bolt h , of which its fore part h' is adapted to traverse only or without rotating, while the rear part is adapted to rotate partially for the purpose of taking the locking-lug h^2 of it into and out of the cross-gap or cut-away part b^4 when the bolt is fully pushed home. Thus the bolt consists of a fore and tubular part h' , with a head h^3 , fitted to take within the entrance a^5 to the chamber a^2 of the barrel a , while the rear consists of an open-bottomed and hollow rear part h^4 , having upon it a rotating sleeve or

tubular part h^5 , as aforesaid, carrying a lug h^2 and a handle h^6 , so that on the bolt being pushed home the whole slides without rotation, when the turning down of the handle h^6 , as represented in Fig. 9, turns the said sleeve and takes the lug h^2 into the locking-gap b^4 . Hence the closing and locking of the bolt to the arm. Working within the hollow interior of the said bolt is a striking-pin i , with head and nose end i^2 and rear i^3 , taking into a bent block i^4 , with bend i^5 formed within the front of its fore part, and wherewith the nose j^2 of a sear j engages, and which sear is liberated by the trigger-blade k^2 of a trigger k , while the said sear, which is pivoted at j^3 , is kept up to its work by a spring m , whose free end takes its bearing against an underside projection. The part-rotating sleeve of the bolt has interiorly a helix or incline h^7 , which impinges against the front i^5 of the bent block i^4 and gives the striker-pin a slight initial rear movement or rear action prior to the withdrawal of the bolt by the sliding of the same from out of the chamber of the magazine and along the channel or race of the shoe. Encircling the striker-pin and disposed between a shoulder i^7 of the head and a shoulder h^8 of the bolt is a coiled spring l , which is compressed by the passing home of the bolt into its locking position, while carried upon the fore part and top side of the bolt is an extractor-limb p , with a hooked end p^2 .

Operation: Assuming the arm to be in the position as represented in Fig. 2 and with a cartridge within the chamber of the magazine now presented to the chamber of the barrel, the pushing home of the bolt h and the turning of the rotating end h^5 , with the lug h^2 taking into a gap or side opening b^4 , made within the shoe b , forces the cartridge lying within the said magazine-chamber home into the barrel-chamber, and also takes the head of the bolt home into the entrance of the said barrel-chamber, compressing the spring l , while the striking-pin is retained by the nose end j^2 of the sear j engaging within the bend i^5 of the bent block i^4 . The pulling of the trigger k turns the sear upon its pivot j^3 and takes the nose end j^2 of it out of the bend i^5 and clear of the block i^4 , when the striker-rod and block are urged forward by the releasing of the spring l , put under tension by the previous operation of closing the bolt. Hence the discharge of the arm. By now turning upwardly the handle h^6 , so as to take its lug h^2 from its locking and holding position, the helix h^7 , carried by the turning part of it, impinges against the front part i^5 of the bent block i^4 , and by it gives an initial rear action to the striker-rod i i^2 i^3 and block i^4 , thus taking the nose end of the said striker-rod from out of the head of the cartridge n , so that no impediment shall be in the way, as hereinafter described, of the spent cartridge case being freely ejected. This done the extractor-rod is slightly held back and traverses rearwardly with the bolt on the same being withdrawn

back by the handle. This rearward traverse of the bolt extracts the cartridge and pulls the same along the chamber or race of the magazine until the lower edge of its rim impinges or strikes against the tilting-pin c^4 , which is within its path, and hence the tilting of the cartridge and the throwing of the same clear of the chamber of the magazine through the side opening or slot d^4 , made through the top side of the cover d . To feed another cartridge, give the chamber one-seventh of a rotation or turn by the passing of the thumb and finger inwardly through the side gaps or piercings d^5 , when the chamber is rotated to the desired extent, and is there held in a positive position and with the chamber and cartridge linable with the axis of the barrel by the catch e engaging with a sinking c^5 corresponding to the magazine-chamber thus presented. The now pressing home of the bolt traverses it through the chamber or channel of the magazine and forces home the cartridge, with the extractor hooked end having snapped over its head, as before described. The same process is repeated for each cartridge to be fed forward and passed into the barrel. The cartridges are introduced into their channels or respective carrying-chambers by dropping the same through the side opening of the cover while the chamber is being rotated. The bolt is prevented from being withdrawn

from the breech-shoe by a stop-catch carried near the free end of a lifting-spring, which engages within a hole or depression formed within the collar.

Having now described my invention, what I claim as new is—

1. In a magazine-firearm, the combination, with the barrel and breech-shoe, of a pivotally-mounted cartridge-cylinder having open-ended and open-sided cartridge-chambers and a casing or jacket inclosing said cylinder and provided with a side passage for the entrance and exit of cartridges and cartridge-shells and with a side opening for the working of said cylinder by hand, substantially as described.

2. In a magazine-firearm, the combination, with the cartridge-cylinder C, having open-sided chambers $c^2 c^2$, of the charging-bolt, the ejector-rod p , carried by said charging-bolt, and the tilting-pins $c^4 c^4$, arranged at the rear ends and bottoms of said chambers, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of December, 1891.

THOMAS WILSON.

Witnesses:

HENRY L. NIERRETT,

ARTHUR T. SADLER,

Both of Birmingham.