D. STERGIANOPULOS.

REPEATING RIFLE.

APPLICATION FILED AUG. 9, 1910.

999,271.

Patented Aug. 1, 1911.

4 SHEETS—SHEET 1.

Fig. 1.

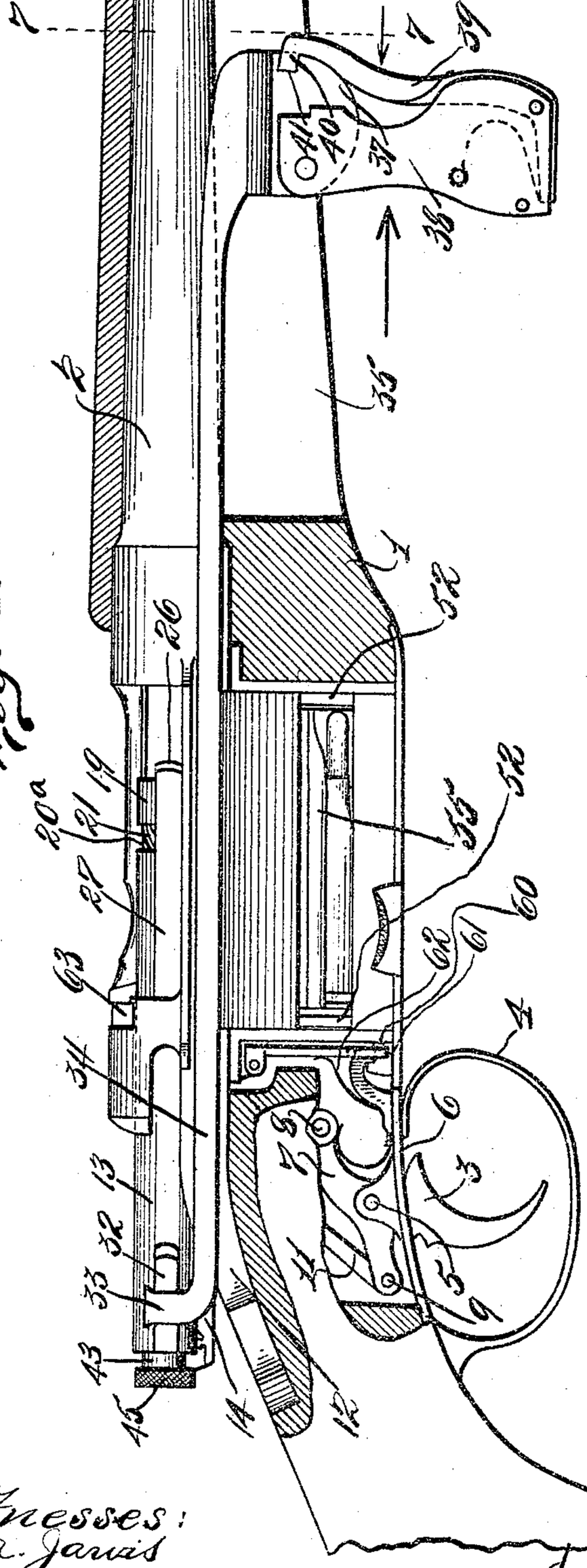
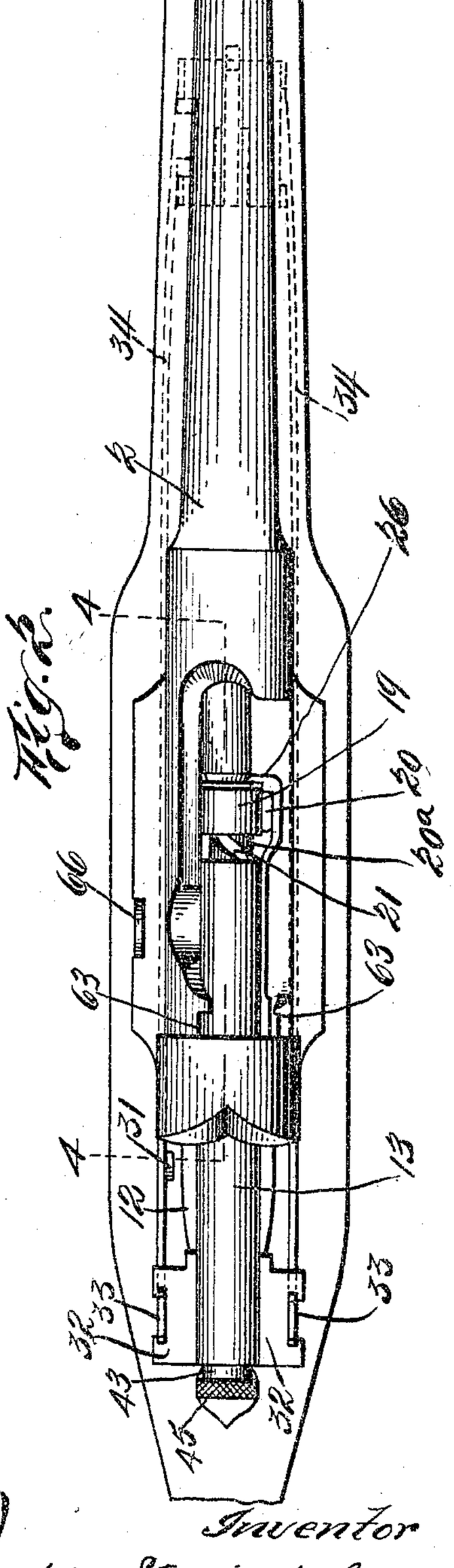


Fig. 2.



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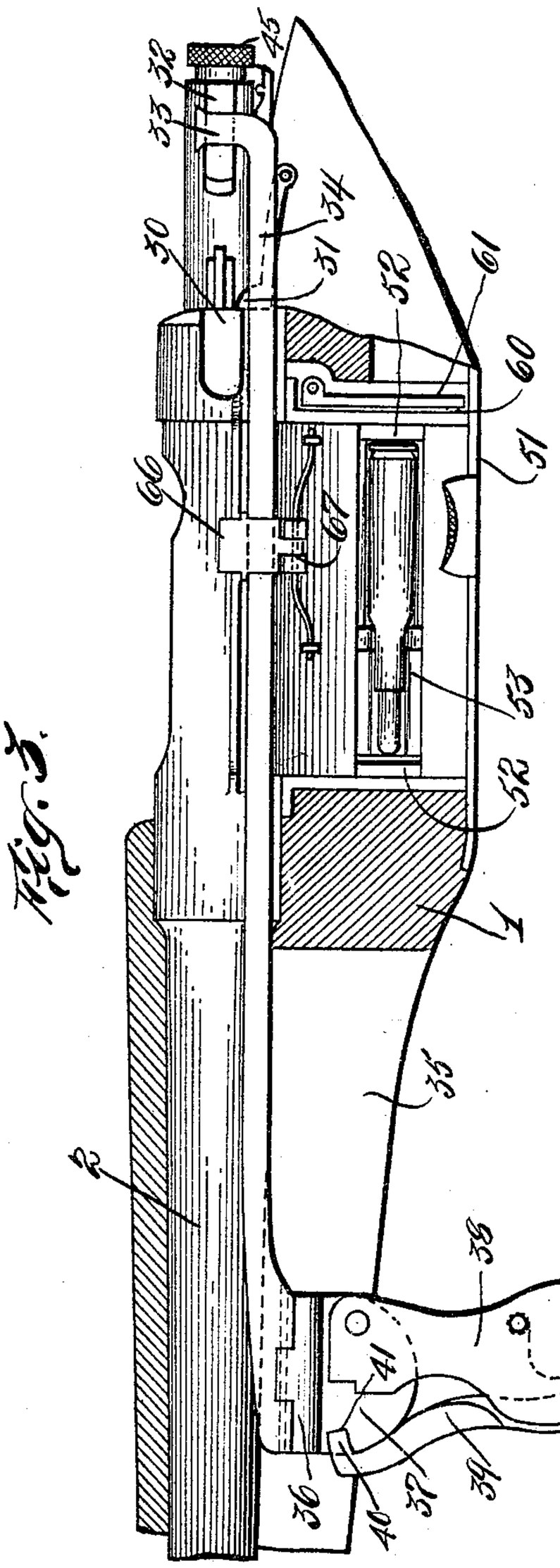

Fig. 3.

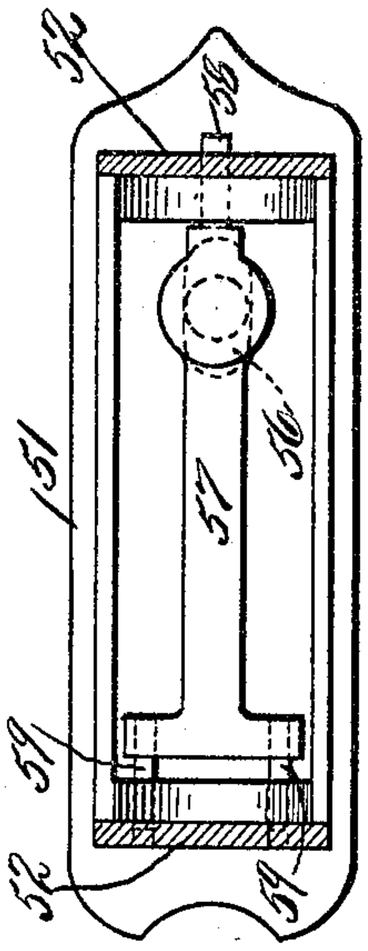

Fig. 5.

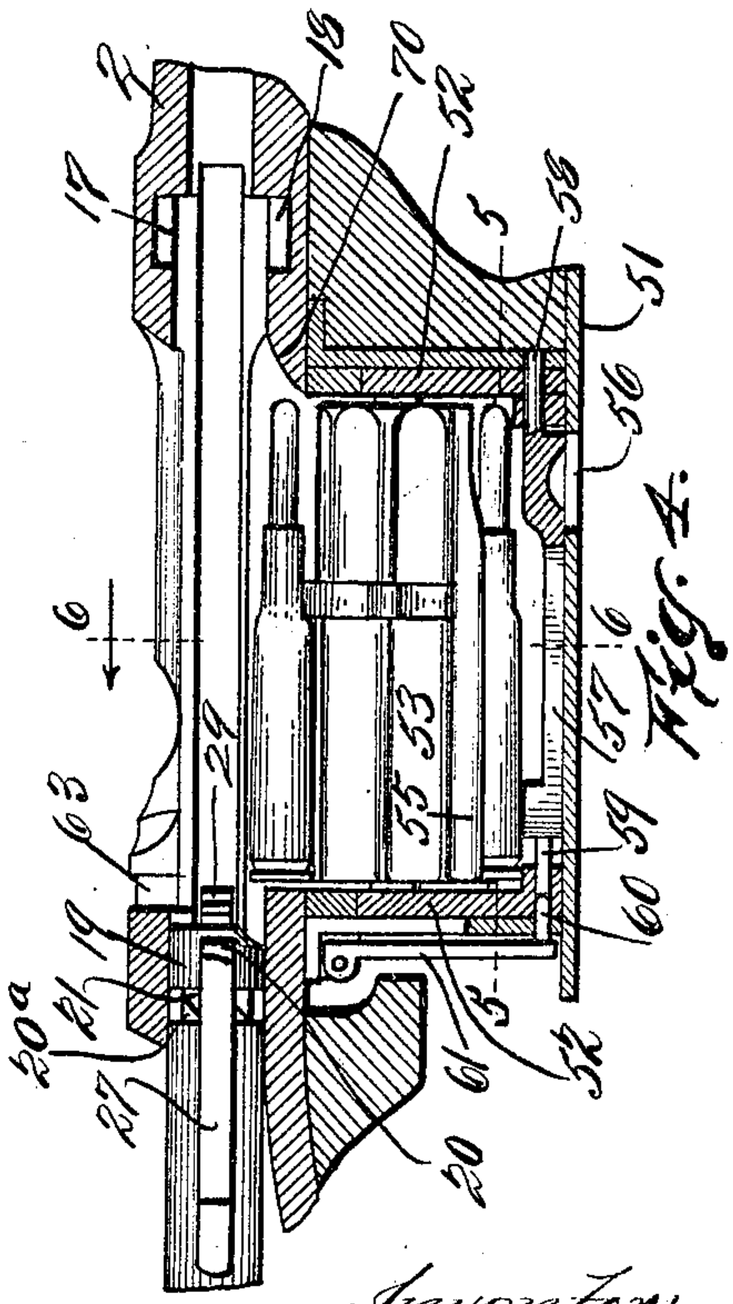

Fig. 4.

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4 SHEETS—SHEET 3.

Fig. 6.

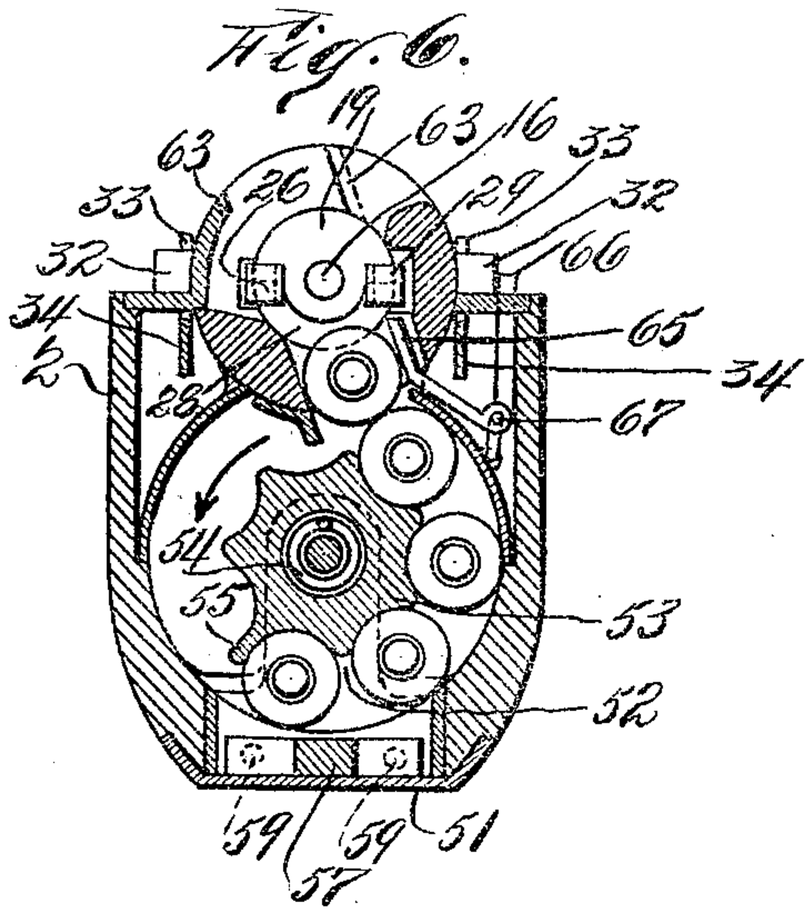


Fig. 7.

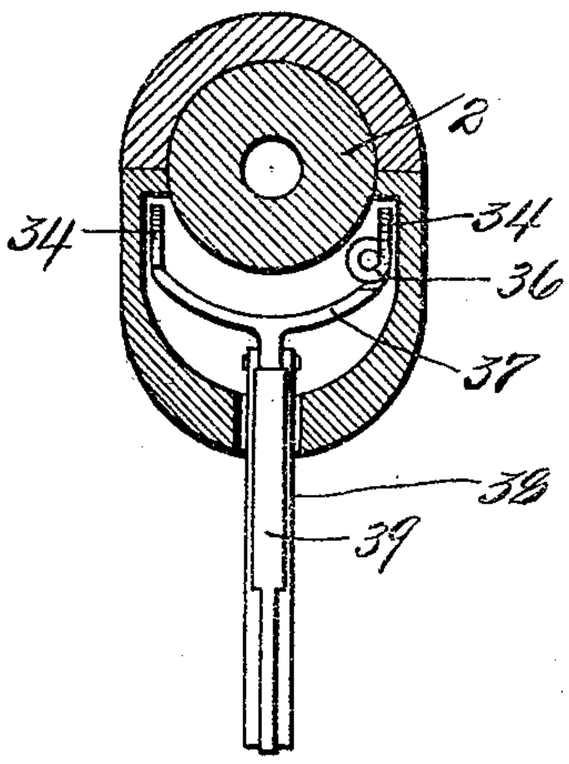


Fig. 8.

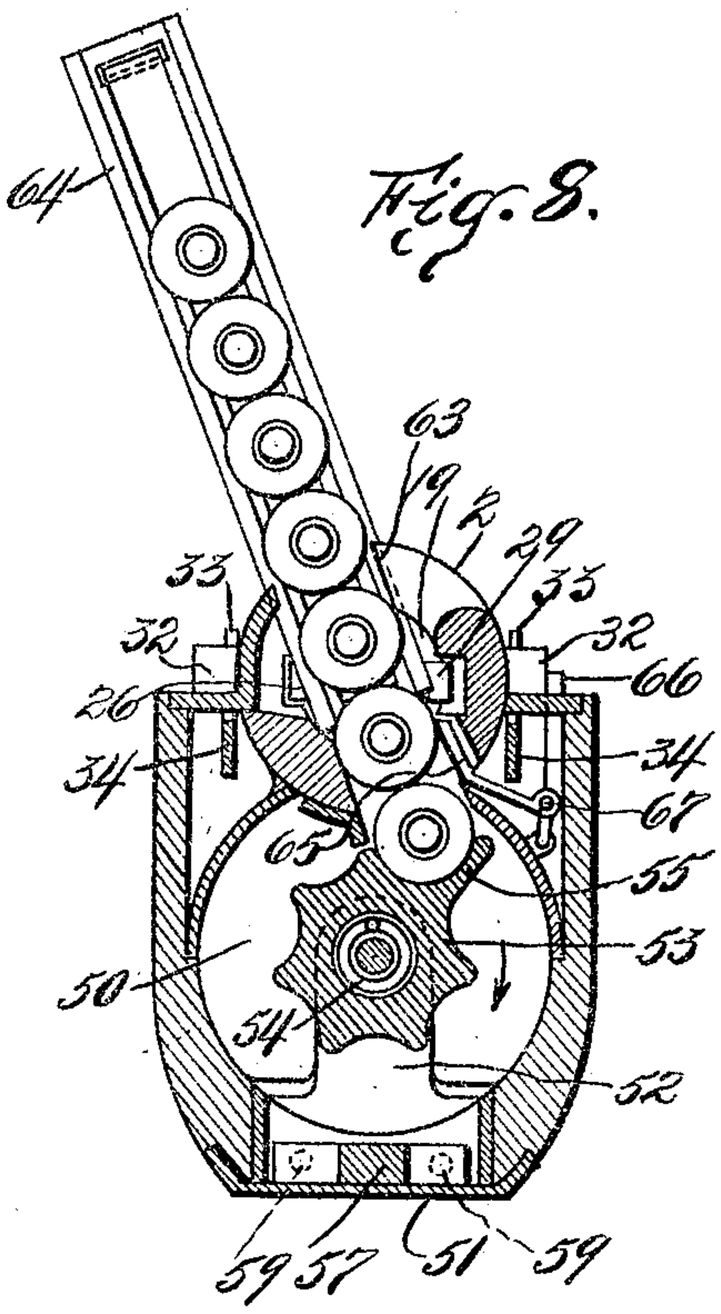
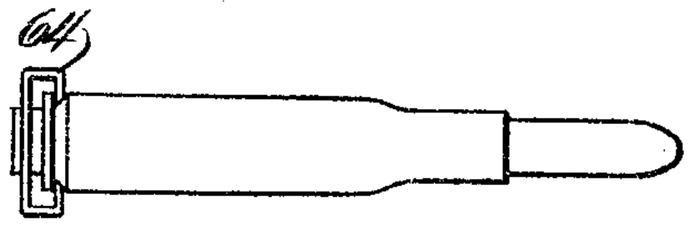


Fig. 9.



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4 SHEETS—SHEET 4.

Fig. 10.

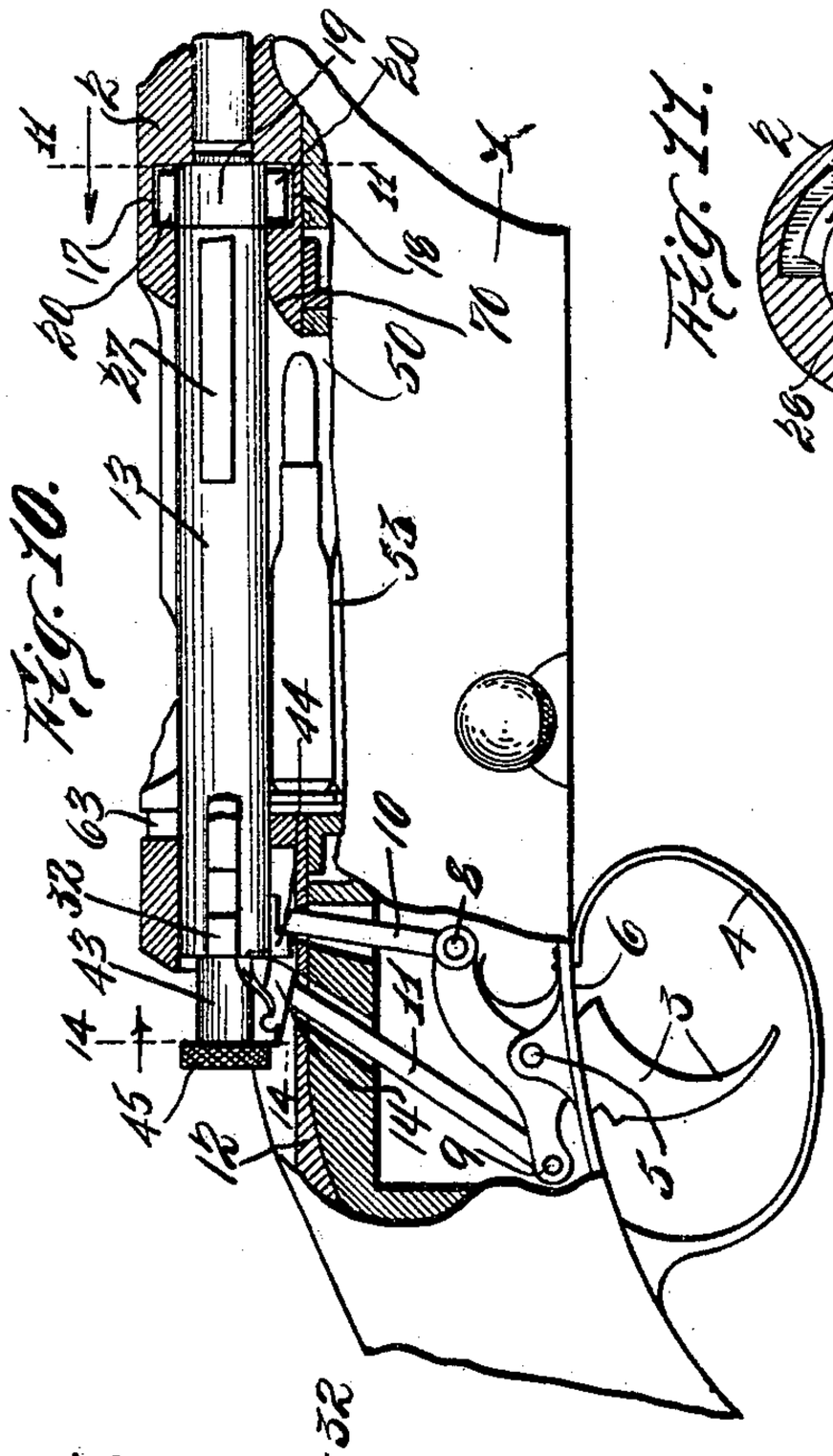


Fig. 11.

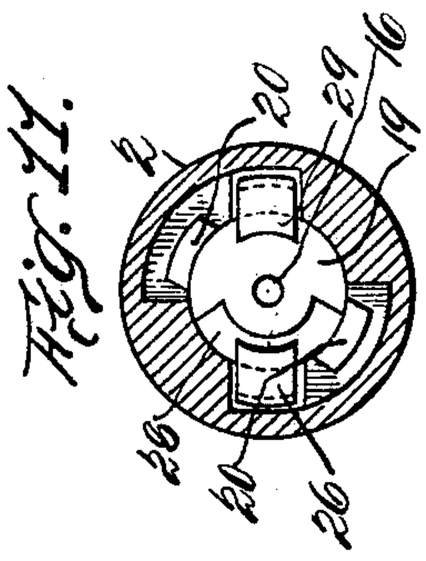


Fig. 12.

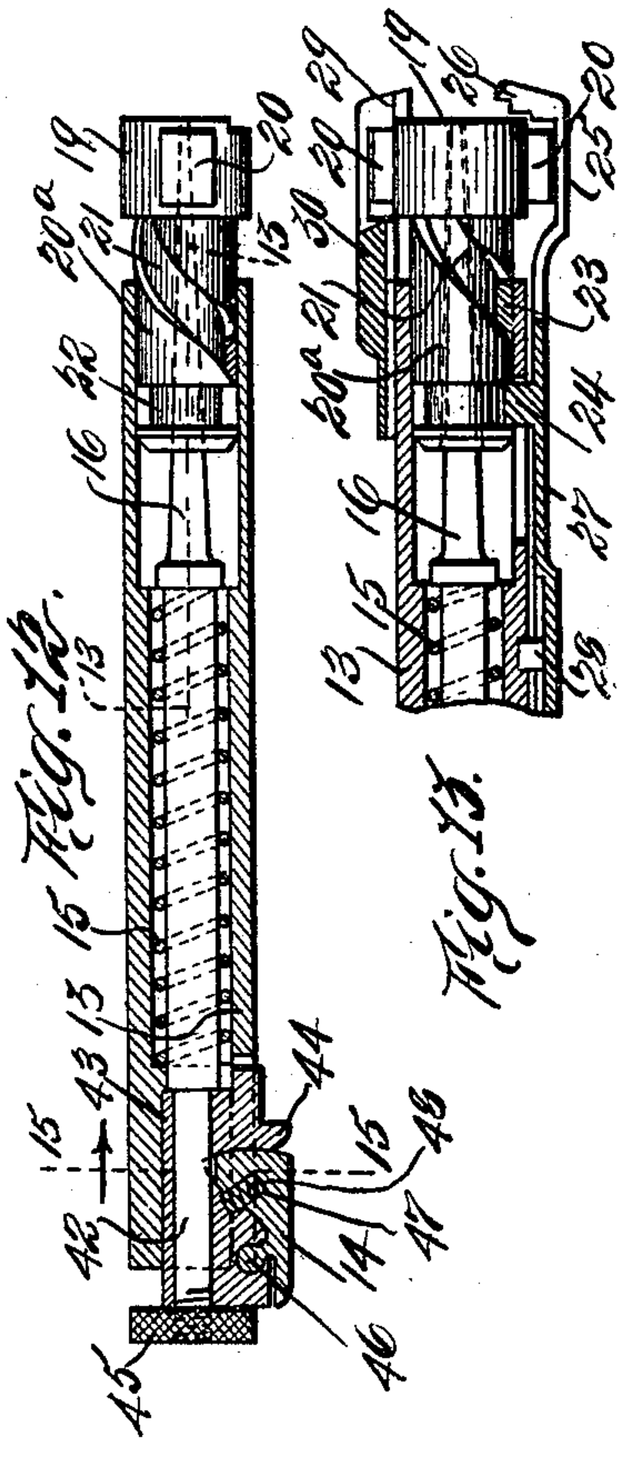


Fig. 13.

Fig. 15.

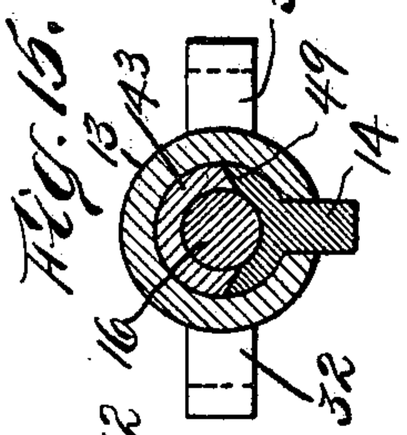


Fig. 14.

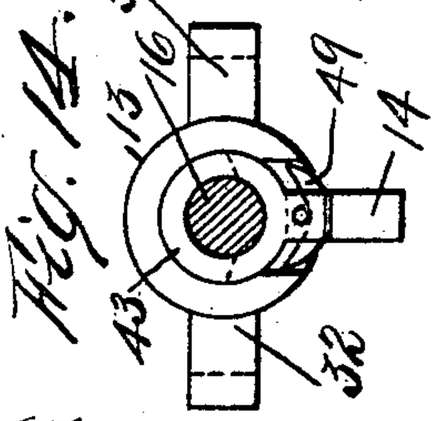


Fig. 16.

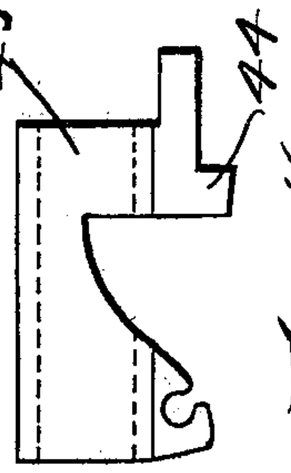
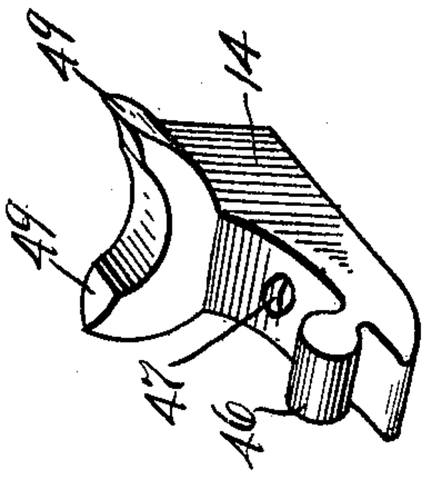


Fig. 17.



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UNITED STATES PATENT OFFICE.

DEMETRIOS STERGIANOPULOS, OF NEW YORK, N. Y.

REPEATING RIFLE.

999,271. Specification of Letters Patent. Patented Aug. 1, 1911.

Application filed August 9, 1910. Serial No. 576,423.

To all whom it may concern:

Be it known that I, DEMETRIOS STERGIANOPULOS, a subject of the Kingdom of Greece, residing at 765 Courtland avenue, New York city, New York, have invented certain new and useful Improvements in Repeating Rifles, of which the following is a clear, full, and exact description.

The object of this invention is to improve the construction of repeating rifles of that class in which the cartridges are held in a rotary magazine within the gun stock, where such gun is provided with an ejector mechanism located along the gun barrel in front of the trigger, so that in manipulating the gun to load, fire and unload, the gunner's hand need never be moved back of the breech in firing successive shots, and at the same time maintaining all the important features of ready loading, which can be secured by a gun provided with a circular magazine within the stock. To load such a gun, it is only necessary to have the cartridges in alinement in the clip, then push the entire series of cartridges into place within the stock.

My invention further relates to various details of construction and arrangement of parts as hereinafter set forth, whereby a simple, cheap, readily assembled, easily constructed and readily cleaned gun can be secured.

In carrying out the main object of my invention, I provide a spring pressed rotating drum having recessed sides located in a cylindrical chamber in the gun stock in front of the trigger mechanism. The breech closer and firing pin mechanism are mounted to slide together backward and forward across the cylindrical chamber to close the same at the top where the cartridges are inserted. This breech closer and firing pin mechanism is reciprocated back and forth by links passing above and across the cylindrical chamber, and the links are operated by a depending handle passing through the slotted forestock of the gun.

The scope of my invention will be pointed out in the claims.

In the accompanying drawings: Figure 1 is a side elevation partly in section, of a portion of a gun sufficient to illustrate my invention. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a view similar to Fig. 1, but taken from the opposite side of the gun, part of the gun stock being shown in section. Fig. 4 is a vertical central sectional side elevation showing the magazine, and is taken on line 4—4, Fig. 2. Fig. 5 is a sectional view taken on line 5—5 Fig. 4, showing the construction of the bottom closing member of the magazine. Fig. 6 is a section taken on line 6—6 Fig. 4, facing the heel of the gun. Fig. 7 is a section taken on line 7—7 Fig. 1. Fig. 8 is a view similar to Fig. 6, but showing the cartridges as they are being inserted into the magazine. Fig. 9 is a detailed view showing the clip in end view and a cartridge in place. Fig. 10 is a side elevation with parts broken away showing the trigger and breech closing block. Fig. 11 is a section taken on line 11—11 Fig. 10. Fig. 12 is a central vertical section of the firing pin and latch, with the breech block shown in side elevation. Fig. 13 is a sectional view of the right hand end of Fig. 12, taken on line 13—13 of Fig. 12. Fig. 14 is a section taken on line 14—14 Fig. 10. Fig. 15 is a section taken on line 15—15 Fig. 12, after the gun has been fired. Fig. 16 is an enlarged side elevation of the firing pin head. Fig. 17 is a perspective view of the firing pin latch.

As shown in the drawings, 1 is the forestock, in which the gun barrel 2 is secured in the ordinary manner, 3 is the trigger protected by the trigger guard 4. The trigger is pivoted at 5 in ears secured to a plate 6 fast in the gun stock. Within the trigger compartment of the stock is a double armed lever 7 forming part of the trigger, and having pivoted to it at 8 and 9 two upwardly extending pins 10 and 11, passing through guides in a metal plate 12 secured on the upper surface of the gun stock. These pins upon pulling the trigger are moved, the pin 10 downwardly and the pin 11 upwardly, one unlatching the firing pin barrel 13, the second unlocking the latch 14, that a spring 15 within the firing pin barrel 13 may project the firing pin 16 against the cartridge. At the rear of the rifle barrel the breech is formed as indicated in Figs. 10 and 11. At this point the rifle barrel is provided with recesses 17 and 18, the material of the barrel forming shoulders to the rear of the recesses. Between the recesses the rifle barrel is open so that the breech block 19 may be inserted into the breech with the breech locking blocks 20 in position to be rotated into a position to be locked behind the shoulders just referred to. To secure this rotation of the breech block 19 it is provided with a

sleeve 20^a fitting into the firing pin barrel 13. The sleeve 20^a is formed with a helical groove 21 and with a reduced portion 22. In the helical groove 21 there is a block 23 fast to the firing pin barrel, so that upon a forward movement of the firing pin barrel and a stoppage of the breech block, the block will be forced into the pin barrel, and at the same time rotated to lock the breech. In the annular recess 22 a lug 24 on a jaw 25 is located. The jaw 25 consists of a jaw proper 26 which is turned over the breech block to engage the base and groove of a cartridge for the purposes hereinafter to be described. An arm 27, part of the jaw member, extends to the rear of the block 24, and is limited in its rearward movement by a pin 28 in the firing pin barrel.

The face of the breech block has a depressed portion 28 which is normally engaged by a turned-over end 29 of a slide arm 30, but which is thrown forward upon the retraction of the firing pin barrel 13 by reason of its end striking against an upwardly spring pressed pawl 31 fast to the gun stock so that the cartridge may be ejected.

Wings or projections 32 at each side of the firing pin barrel 13 are engaged by hooked ends 33 of long links 34 which pass through the magazine above and to one side of the cartridges. The links 34 meet within a longitudinal slot 35 on the gun stock forward of the magazine, one link being pivotally fastened by a hinge 36 to a plate 37 to which is pivoted a handle 38. The handle 38 has a spring pressed latch 39 with a hooked end 40 adapted to engage a notch 41 in the plate 37 to keep the same rigid for the hand's grasp while shooting but at other times the latch 39 may be unhooked and the handle swung out of way into the slot 35. The firing pin 16 has a shank 42 on which is mounted a sleeve 43 having a depending lip 44 and a pivoted latch 14. A set nut 45 holds the sleeve in place and serves to adjust the firing pin 16 in its firing position. The latch 14 is provided with a cylindrical lug 46 fitting a bearing in the sleeve 43 and is recessed at 47 for a spring 48 tending to throw the latch 14 into the position of Fig. 10. The firing pin barrel is slotted at its end to permit the entrance of the latch 14 and lip 44 into the firing pin barrel, but wings 49—49 at the sides of the latch 14 are adapted to hold the latch in the position of Fig. 10 until elevated by the pin 11 to aline with properly recessed portions of the sleeve 43 when the spring will project the firing pin. When the trigger 3 is pulled not only is the latch 14 lifted that it may enter the firing pin barrel but the pin 10 is lowered to allow the lip 44 to move forward. Also, when the pin barrel is withdrawn rearwardly both latch 14 and lip 44 pass freely over the ends of the pins 10 and 11, but upon closing the breech with a forward movement the lip 44 catches against the pin 10 and holds the sleeve 43 back releasing the wings 49 to cock the gun.

The magazine chamber 50 is closed at the bottom by a plate 51 provided with uprights 52 carrying a freely rotatable drum 53 having a longitudinally fluted surface to form cradles for the cartridges. A spring 54 tends to rotate the drum into the position of Fig. 8. One long lip 55 receives the first cartridge to be inserted. The plate 51 has a finger hole 56 through which a slide bar 57 may be moved back and forth. The slide bar 57 carries a pin 58 in its forward end to engage a hole in the forward wall of the magazine chamber and two pins 59 at its other end alined with two pins 60 at the end of a pivoted arm 61. A spring 62 normally holds the arm 61 in the position of Fig. 1, so that upon inserting the plate and drum the pins 60 will force the slide bar forward, engage the uprights and cause the forward pin to engage the wall of the chamber.

The gun barrel back of the breech is open at the top and to one side (see Figs. 1 and 2, 6 and 8) and the magazine is closed by the firing pin barrel when in its forward position. The gun barrel is slotted clear through to allow the cartridges to enter the magazine and is provided with a pair of guide shoulders 63 (Fig. 2) to support and hold one end of a cartridge clip 64 that its cartridges may be quickly and readily inserted into the magazine as shown in Fig. 8. When the gun has been thus loaded one cartridge remains above the others as shown in Fig. 6; it may be struck by the breech block and forced into the rifle bore upon moving the handle 38 forward. A resiliently held plate 65 normally bears against the upper cartridge with sufficient pressure to prevent the ejection of the cartridges in the magazine. A push pin 66, Fig. 3, is provided however to relieve its tension on such cartridge that all cartridges may be expelled if desired. The plate is pivoted at 67 (see Figs. 6 and 8.)

In using the rifle the cartridges in the clip 64 are inserted as shown in Fig. 8 when pressure on the topmost cartridge will cause them to enter the magazine thereby rotating the barrel 53 with the last cartridge in the position of Fig. 6 held there by the plate 65. The handle is then thrown forward causing the breech block to strike the tail end of the upper cartridge, force it over the curve 70 of the rifle barrel and into the bore of the gun. The breech block enters the slots provided for it, Figs. 4 and 11, and stops in its forward movement; the pin barrel continues its forward motion rotating through the stud 23 and helical groove 21 the breech block to lock it in position. The gun has been cocked as before described by the lip

44 being held by the pin 10. The trigger is then pulled, the firing pin passes through the block and strikes the cartridge. The handle is then pulled back, the jaws 26 and 29 engaging the cartridge groove and the cartridge is extracted into the open part of the barrel until the end 30 of the jaw 29 strikes the pawl 31 when that jaw suddenly stops while the other jaw is still pulling the cartridge back resulting in a quick snappy sidewise throw of the cartridge which expels it from the gun. The next cartridge through effort of the spring pressed drum then comes into a position in front of the breech block for a repetition of the operation.

It will be noted that the gun can be loaded by using a clip in an approved manner and that all shells may be fired and ejected without taking the hand from the handle 38 or lowering the gun from the shoulder. It will also be noted that one motion of the handle 38 places the cartridge in position, locks the breech and sets the firing mechanism.

I claim as my invention:

1. A gun having a barrel, a stock, a magazine, a spring pressed holder for cartridges therein adapted to hold the cartridges in a circular arrangement within the stock of the gun, a trigger mechanism, a firing mechanism, a breech block, and a handle forward of the magazine and means connecting it to the said breech block whereby said breech block may be continuously moved back and forth without changing the position of the gunner's hands, said trigger mechanism comprising two pins moving in opposite directions, said firing mechanism consisting of a firing pin, a spring therefor, a barrel for the pin, a sleeve secured to the pin, a lip and a pivoted winged latch on the sleeve, the lip engaging one of its oppositely moving pins, the latch the other, when the gun is in firing position.

2. The herein described gun comprising a barrel, a stock, a breech block and cartridge extracting jaws, a firing pin barrel carrying said block and jaws, a helical groove on the block and an engaging block on the barrel, a spring pressed firing pin in the barrel, a sleeve on the firing pin, a lip and a pivoted latch on the sleeve, the firing pin barrel being slotted to admit the lip and latch, the sleeve being shaped at its end to receive wings 49 on the latch when in its closed position and a pair of oppositely moving pins adapted to engage, one the lip and the other the latch, and a trigger mechanism connected to said pins.

3. A gun as herein described, comprising a barrel, a stock, trigger mechanism and a firing mechanism, a magazine, a spring rotated drum therein, said barrel being open through for loading cartridges into the magazine, said drum carried on a plate fitting the gun stock and a latch mechanism for readily attaching and detaching said plate and drum, said latch mechanism comprising a sliding bar with pins in its ends, a pin and spring therefor in the wall of the magazine adapted to strike one of the pins of the sliding bar when the same is inserted in place and displace it that its other pin may be caused to engage a wall of the magazine.

4. A gun of the type described, having an operating ejecting handle for the cartridge, ejecting mechanism and a rod therefor, movable longitudinally of the gun stock, said stock having a slot or groove to receive the handle, said handle being pivoted to its rod, and provided with a latch whereby it may occupy a position within the slot or extended therefrom.

Signed at New York city, New York, this 3rd day of August, 1910.

DEMETRIOS STERGIANOPULOS.

Witnesses:
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