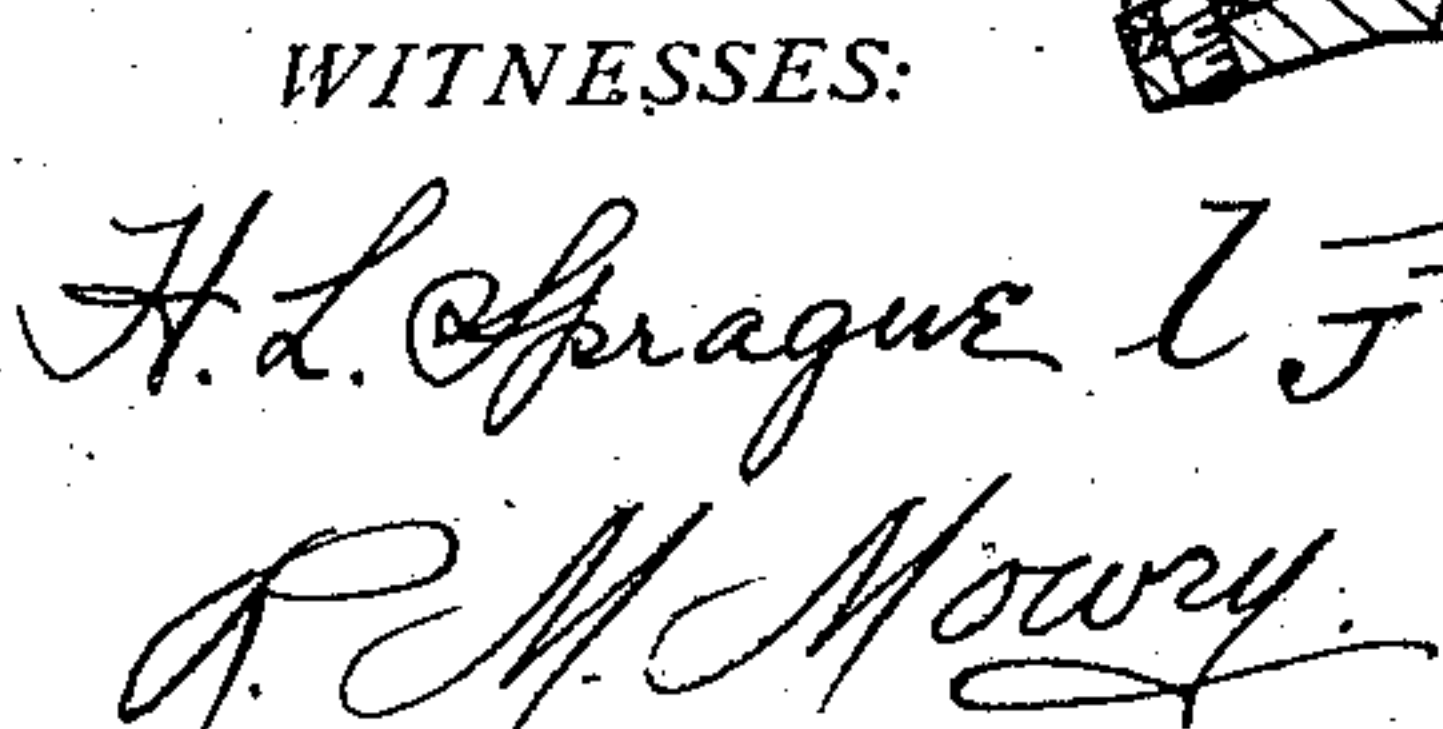


APPLICATION FILED JULY 19, 1909.

Patented Jan. 25, 1910.

2 SHEETS—SHEET 1.



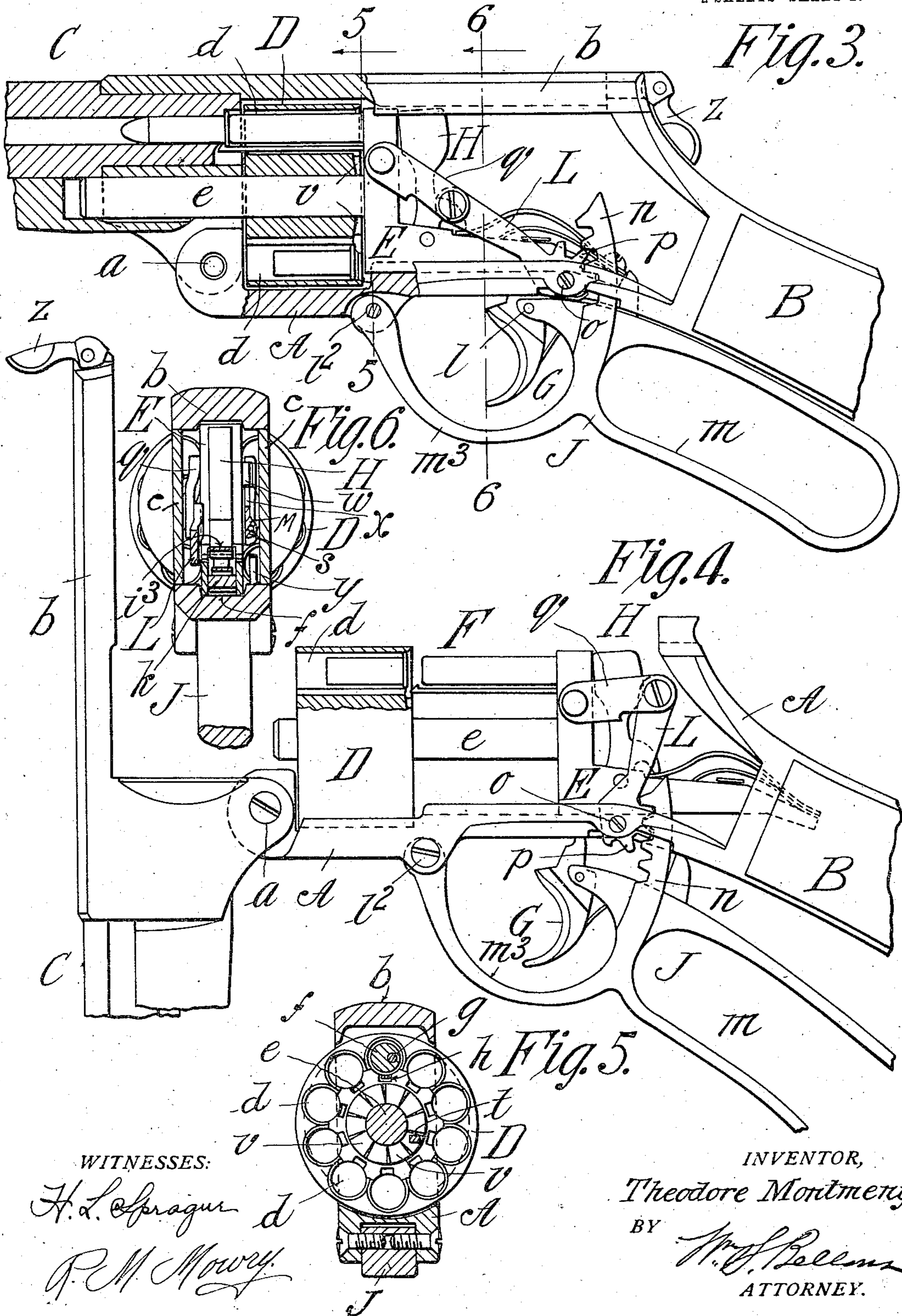
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 REPEATING FIREARM.
 APPLICATION FILED JULY 19, 1909.

947,307.

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2 SHEETS—SHEET 2.



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REPEATING FIREARM.

947,307.

Specification of Letters Patent.

Patented Jan. 25, 1910.

Application filed July 19, 1909. Serial No. 508,322.

To all whom it may concern:

Be it known that I, THEODORE MONTMENY, a citizen of the United States of America, and resident of Chicopee, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Repeating Firearms, of which the following is a full, clear, and exact description.

This invention relates to improvements in fire arms of a kind in which a multiple chambered cylinder is revolubly mounted in the frame behind the barrel and in which the cartridges to be sucessively fired are carried in the cylinder to which revoluble movement is intermittently imparted at each actuation of the fire arm.

In the present firearm the chambers in the cylinder are of sufficiently large diameter to permit the cartridges (preferably of a rim type) to be moved endwise entirely through the chambers of the cylinder and into the barrel. And the invention comprises in combination with the frame, barrel and revolubly mounted cylinder, means for transferring a cartridge from a cylinder chamber in line with the barrel, into the barrel, means for firing the cartridge in the barrel, means for withdrawing the cartridge shell from the barrel back into the cylinder chamber it previously occupied, and a device for intermittently rotatively moving the cylinder to bring the next chamber and its cartridge in line with the barrel.

The invention, furthermore, consists in certain other combinations and arrangements of parts and the constructions of certain of the parts all substantially as hereinafter fully described in conjunction with the accompanying drawings and set forth in the claims.

In the drawings:—Figure 1 is a side elevation of a portion of the fire arm in which the present improvements are comprised, the parts being in their positions in readiness for firing,—the closing plate for the side of the frame being absent; Fig. 2 is a view similar to Fig. 1, but showing the parts as in their positions assumed when the carrier block is moved to its rearward limit; Fig. 3 is a view of the gun at the opposite side of Fig. 1 with the parts in position corresponding thereto and with the cylinder and barrel in central longitudinal section; Fig. 4 is a view showing the gun as open, the novel parts being in a position corresponding to

Fig. 2; Fig. 5 is a cross sectional view on line 5—5, Fig. 3; Fig. 6 is a cross sectional view on line 6—6, Fig. 3; Fig. 7 is a sectional view centrally and vertically through the carrier block and cartridge transferring bolt, firing pin and extractor, and showing the self cocking hammer mounted in the carrier block; Fig. 8 is a perspective view of the pawl device which imparts the intermittent rotative movement to the multiple chambered cylinder.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings,—A represents the frame of the fire arm shown as of skeleton-like construction and carrying the stock B at its rear and having the barrel C hinged at *a* to its forward portion,—the barrel carrying a rear extension *b* to extend over and in part to close the opening in the frame.

D represents the cylinder having multiple chambers *d* for cartridges which as indicated in Figs. 3 and 4 are rimmed cartridges, the diameter of the cylinder chambers being sufficiently large to receive the whole of the cartridges including their rims therein so that the cartridges may be pushed bodily entirely through the cylinder and into the barrel. The cylinder has a central longitudinal hole therethrough whereby it is mounted on a stud *e* which is formed as a part of and projects forwardly from a carrier block E which is of an L-shape, its base member being fitted in a horizontal slide-way *f* in the lower part of the hollow frame.

The carrier block to which a backward and forward sliding movement is imparted by means hereinafter pointed out has as a fixed extension thereof a forwardly projecting horizontal bolt F in line with the bore of the barrel; and *g* represents a firing pin extending along, and endwise movable relatively to the said bolt, it being represented in the present instance as having a play through a longitudinal hole in the bolt and adapted when struck by the hammer H to have a slight forward throw or impulse as common for firing pins to explode the cartridge, it being understood that the firing pin is to be located near the side of the bolt for rim fire cartridges, and axially of the bolt for center fire cartridges.

The rearward movement of the carrier block, rearwardly from the cylinder is such, as represented in Fig. 4, to withdraw the bolt and firing pin entirely free and clear

from the chamber of the cylinder which is uppermost and in line with the barrel and with such bolt.

Along and close to the under side of the bolt is an extractor rod h , the forward end thereof projecting slightly beyond the forward end of the bolt and having an extractor hook h^2 , the nose of which is inclined as quite common in devices of this kind; and the extractor rod being of a spring character may have a slight transverse deflection as necessary when the hooked end of the extractor is crowded to engagement with the rim of the cartridge which is in the barrel. as shown in Fig. 3, at the time that the carrier block and bolt are moved forwardly.

The hammer H is mounted for its swinging movement behind the bolt and firing pin on the pivot i in a recess j therefor in the lower horizontal member of the carrier block E , said hammer having a rearwardly extending projection i^2 in engagement with which is a hammer spring i^3 , the hammer and its spring being bodily carried by the carrier block. And the hammer has pivoted thereto, as seen at k^2 in Fig. 7, a horizontally arranged and rearwardly extending dog k with which the trigger G coacts for the self cocking of the hammer to be followed by its release for striking the firing pin under the reaction of its spring i^3 .

The trigger G is pivotally mounted at l to a part of a handle lever J which is pivotally mounted at l^2 to the frame forwardly of the trigger. The said handle lever J is provided at its rear with a loop shaped hand engagement portion m while forward thereof and between such portion m and the pivot l^2 the handle lever is curved, as represented at m^3 to form a trigger guard.

The backward and forward sliding movements of the carrier block are imparted by comparatively slight swinging movement, the range of which is perceived by comparison of Fig. 4 with Fig. 3,—of the handle lever J through means as follows:—The lever at a portion thereof just to the rear of the trigger is provided with a rigid curved comparatively short gear toothed member or rack n , and the lever L pivoted to the lower portion of the frame o is made with a gear toothed end or partial pinion or sector gear p , the teeth of which are in constant mesh with the teeth of the upstanding member n of the handle lever, so that the comparatively slight swinging movement of the handle lever will impart a comparatively long swinging movement,—approximately through a quarter of a circle of the lever L ; and such lever is connected at its free end by the link q to the carrier block so that the slight swinging movement of the handle lever through the described connections imparts the comparatively long reciprocation to the carrier block.

When the handle lever is swung down, as shown in Fig. 4, and the carrier block with the hammer is moved to the rearward limit, the trigger is carried bodily downwardly with the handle lever so as to be out of engagement with the hammer and constitute no obstruction to its rearward movement as bodily carried by the carrier block; but when the lever is returned to its upward position, shown in Fig. 1, the trigger resumes its position of engagement with the rear end of the dog k , as indicated in Fig. 7; and for discharging the firearm it is only necessary to draw on the trigger with the finger to result firstly in forcing the dog end-wise forward and the hammer back, and secondly on the continuation of the trigger movement sufficiently far to release the trigger from engagement with the dog to leave the hammer subject to the action of the hammer spring.

Closely alongside the carrier block E , but at the side opposite from that at which the lever and link L, q are located,—is a pawl carrying lever M shown in Figs. 1, 2 and 8, and pivoted at its rear end r to an ear lug upstanding from a lower portion of the open work frame. This lever M is formed with a longitudinal forwardly opening bore s in which is a bar or rod t formed with a nose or pawl t^2 at its forward end, said bar being slightly rearwardly slidable against the spring u seated in the bore and to be outwardly pressed by such spring.

The cylinder has at its rear face a circular series of ratchet teeth v represented in Figs. 3 and 5; and on a downward swinging movement of the pawl carrying lever M , the pawl may click over one of these ratchet teeth assuming an engaging position so that on the upward swinging movement of the pawl carrying lever the cylinder will be ratcheted around sufficiently far to bring the cylinder chamber next to the one which had been in alinement with the barrel around to such position of barrel alinement. The means for imparting the downward swinging movement to the pawl carrying lever consists in a roller stud w , Figs. 1 and 2, projecting from the side of the carrier block and the inclined formation x of the upper edge of the lever; while the means for imparting an upward swinging movement of the pawl carrying lever, operative when the carrier block is at its rearward limit and the bolt firing pin and extractor are rearwardly clear of the cylinder, is constituted by the simple flat springs y .

The gun may be broken open, as represented in Fig. 4, leaving the forward end of the chambered cylinder D exposed so that the cartridges may be filled into all the chambers thereof whereupon the gun will be closed and confined by the cam lever z ; and it being assumed that the handle lever

is in its normal or downwardly swung position, Fig. 2, the operator will then upwardly swing the handle lever to force the carrier block forward and to project the bolt through the uppermost cylinder chamber forcing the cartridge into the barrel, as shown in Fig. 3; then the properly continued pulling of the trigger will cock and liberate the hammer for firing and repeated firings may be rapidly accomplished by the simple slight downward and upward returning movement of the handle lever and the pulling of the trigger, it being here stated that rapid successive firing may be easily accomplished without disarrangement of the aim, as the hand, the middle fourth and fifth fingers of which are through the handle loop *m* while the forefinger embraces the trigger, may easily accomplish all required manipulations with but slight deflecting movements,—unlike those required in the pumping action of repeating firearms having a long throw lever for operating the action.

The cartridges will be prevented from rearward displacement from the cylinder chambers by the cheek plates *c* which close the hollow frame, the forward ends of such plates being in proximity to the rear end of the cylinder adjacent the opposite portions thereof.

The operator may, when desired to place the gun at safety so that it may not be fired by the pulling of the trigger, disengage the trigger from the dog by an action of partially lowering the handle lever *J* and swinging the lower portion of the trigger rearwardly so that the upwardly extending trigger nose is forward of, and under the dog *k*,—the restoration of the trigger to its dog engaging position being accomplished by again downswinging the handle lever leaving the trigger free on the upward return of the handle lever to assume a position in relation to the dog represented in Fig. 7.

I claim:—

1. In a revolving cylinder fire arm, in combination, the frame and barrel, a multiple chambered cylinder revolubly mounted in the frame behind the barrel, a carrier block slidable in the frame behind the cylinder and carrying a forwardly extending bolt in line with the barrel, a handle lever hinged to the frame and having a gear toothed member, a lever, pivoted to the frame, and having a gear toothed portion in mesh with said gear toothed lever member, a link connecting the latter named lever and the carrier block, and means for intermittently rotatively moving the cylinders.

2. In a revolving cylinder fire arm, in combination, the frame and barrel, a multiple chambered cylinder revolubly mounted in the frame behind the barrel, a carrier block slidable in the frame behind the cylinder and carrying a forwardly extending

bolt in line with the barrel, a lever hinged, at its forward end, to an under portion of the frame, provided at its rear with a loop shaped hand engagement portion and having an upwardly extending curved rack-toothed member projecting into the frame, a gear ended lever, pivoted in the frame, and in engagement with said rack-toothed lever member, a link connecting the gear ended lever and the carrier block, and means for intermittently rotatively moving the cylinder.

3. In a revolving cylinder fire arm, in combination, the frame and barrel, a multiple chambered cylinder revolubly mounted in the frame behind the barrel, a carrier block slidable in the frame behind the cylinder and carrying a forwardly extending bolt in line with the barrel, a firing pin extending along and endwise movable relatively to the said bolt, a hammer pivotally mounted on the carrier block, and coacting with the firing pin, a handle lever hinged to the frame and having a gear toothed member, a lever, pivoted to the frame, and having a gear toothed portion in mesh with said gear toothed lever member, a link connecting the latter named lever and the carrier block, means for actuating the hammer, and means for intermittently rotatively moving the cylinder.

4. In a revolving cylinder fire arm, in combination, the frame and barrel, a multiple chambered cylinder revolubly mounted in the frame behind the barrel, a carrier block slidable in the frame behind the cylinder and carrying a forwardly extending bolt in line with the barrel, a firing pin, extending along and endwise movable relatively to, the said bolt, a hammer pivotally mounted on the carrier block, behind and for coaction with the firing pin, a handle lever hinged to the frame and having a gear toothed member, a lever, pivoted to the frame, and having a gear toothed portion in mesh with said gear toothed lever member, a link connecting the latter named lever and the carrier block, a trigger pivotally mounted on the handle lever and having a self cocking coaction with the hammer, and means for intermittently rotatively moving the cylinder.

5. In a revolving fire arm, in combination, the frame and barrel, a multiple chambered cylinder revolubly mounted behind the barrel, a carrier block slidable in the frame beyond the cylinder and carrying a forwardly extending bolt in line with the barrel, a firing pin extending along, and endwise movable relatively to, said bolt, a hammer pivotally mounted in a recess therefor in the carrier block behind and for coaction with the firing pin, and having pivoted thereto below its supporting pivot a rearwardly extending dog, a handle lever hinged to the

frame operatively connected with and for moving the carrier block forwardly and rearwardly and having a trigger pivoted thereto, said trigger having a member in engagement with the rear end of said dog and operative through the latter for throwing the hammer to a backward position and then releasing it for firing, a hammer spring and means for intermittently rotatively moving the cylinder.

6. In a firearm of the character described, in combination, the frame and barrel, a multiple chambered cylinder revolubly mounted in the frame behind the barrel and having at its rear a circularly arranged series of ratchet teeth, a carrier block slidable in the frame behind the cylinder, carrying a forwardly projecting bolt in line with the barrel and having a sidewise projecting stud,

a lever pivotally connected to the frame for a vertical swinging movement at one side of the carrier block, having an inclined upper edge to be engaged by the aforesaid sidewise projecting stud, provided with a pawl member for engagement with the cylinder ratchet teeth and a spring for forcing said pawl carrying lever upwardly, and means for reciprocating the carrier block whereby its bolt is alternately withdrawn from the cylinder chamber and moved forwardly through a cylinder chamber to transfer a cartridge therefrom into the barrel.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

THEODORE MONTMENY.

Witnesses:

G. R. DRISCOLL,

WM. S. BELLOWES.