No. 719,254. PATENTED JAN. 27, 1903.

E. G. PARKHURST, DEC'D.

J. E. PARKHURST, EXECUTRIX.

# MAGAZINE BOLT GUN.

APPLICATION FILED NOV. 2, 1898.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 11

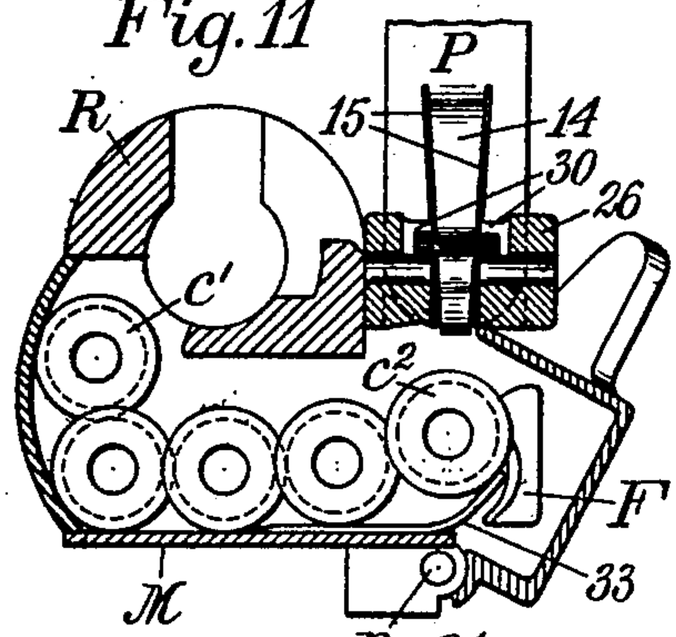



Fig. 8

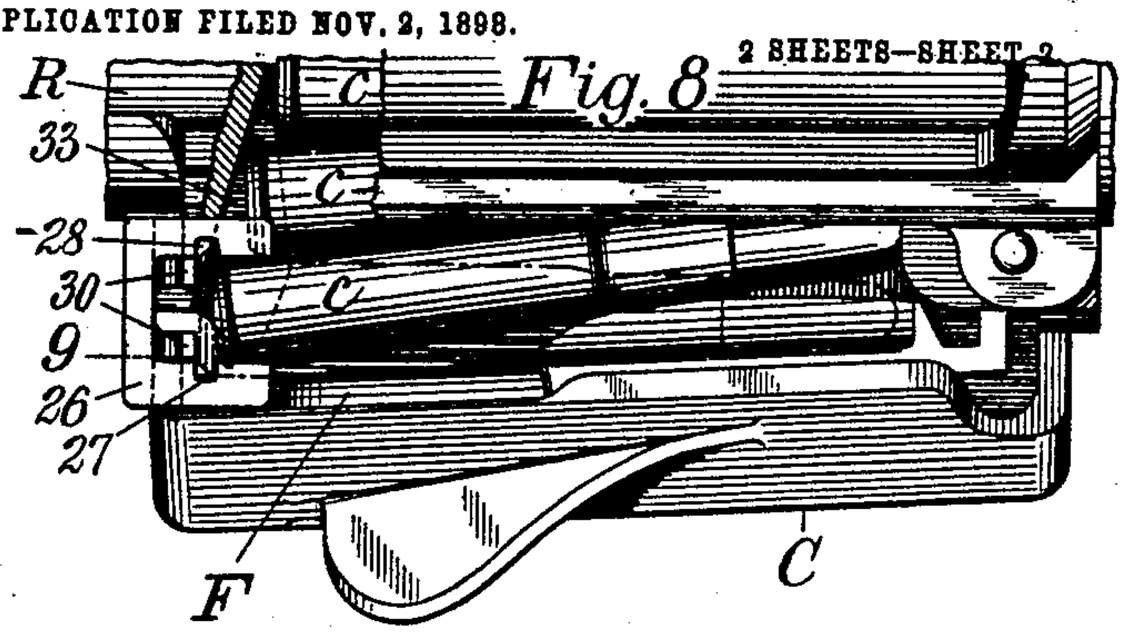



Fig. 10

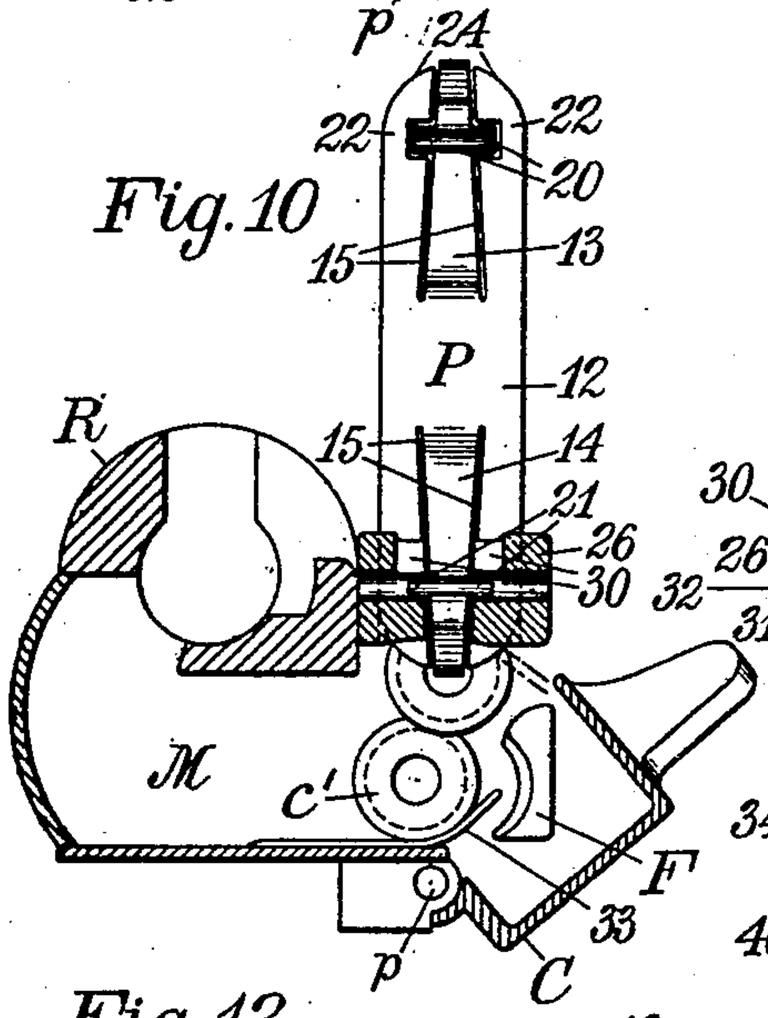



Fig. 9

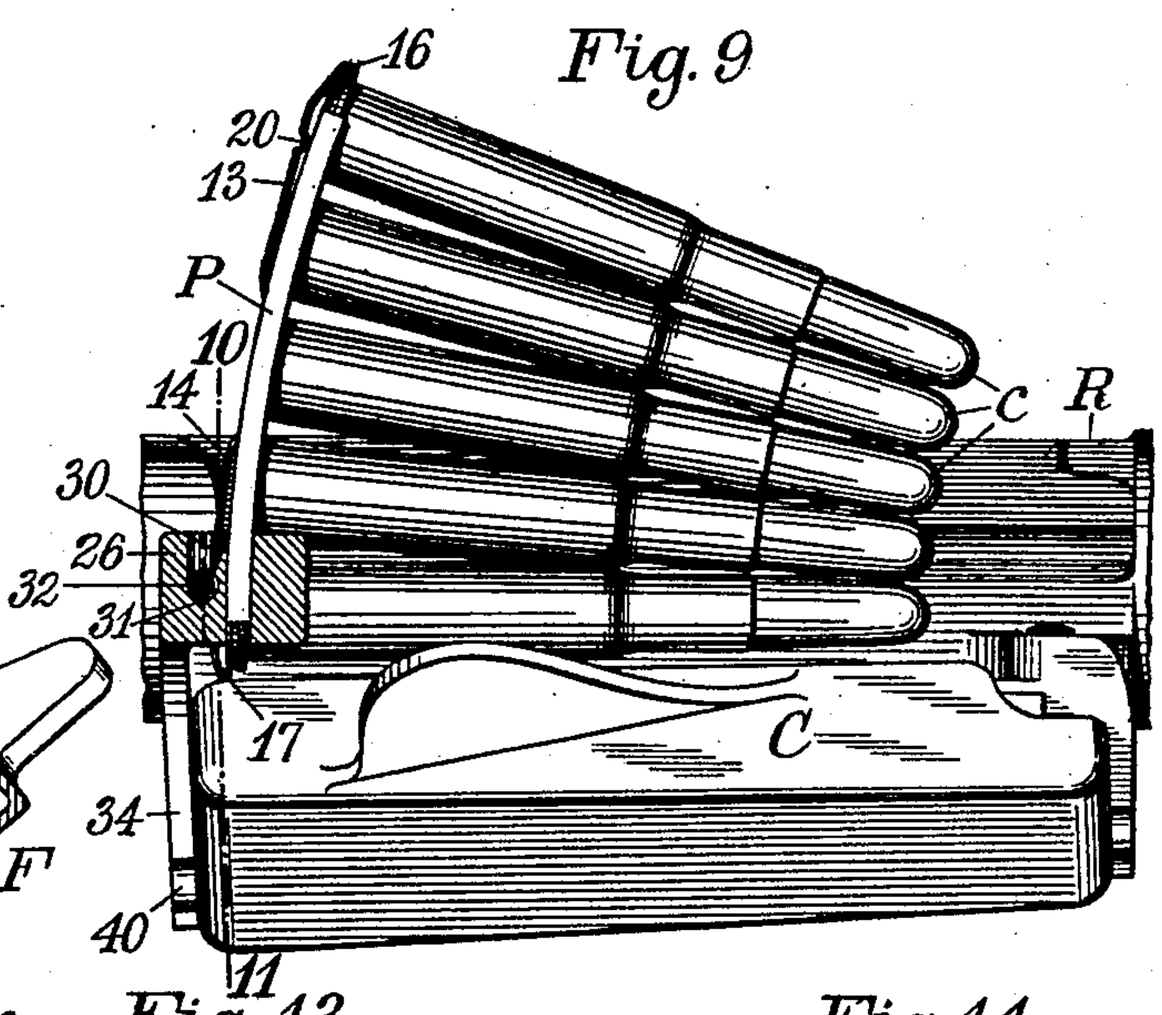



Fig. 12

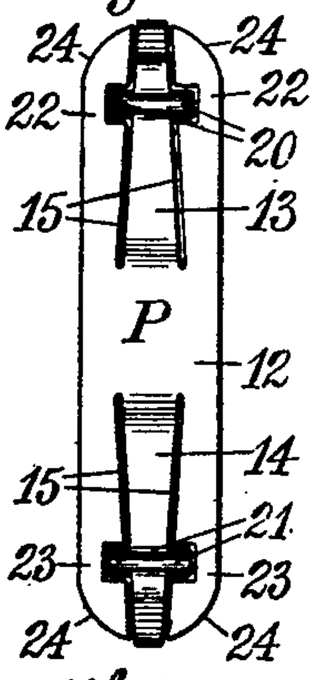



Fig. 13

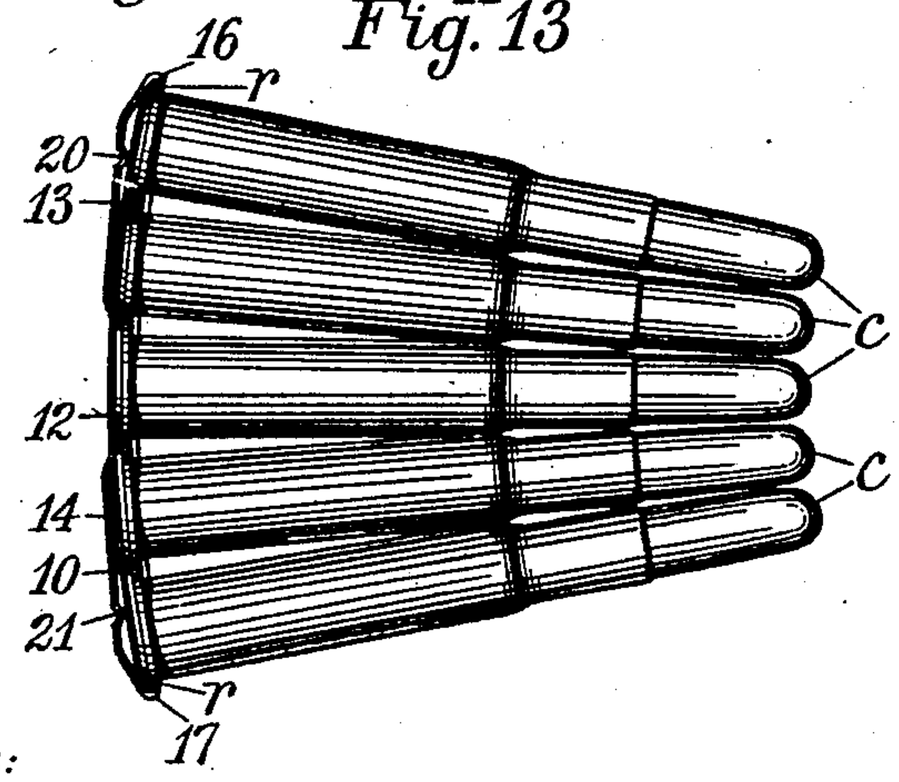
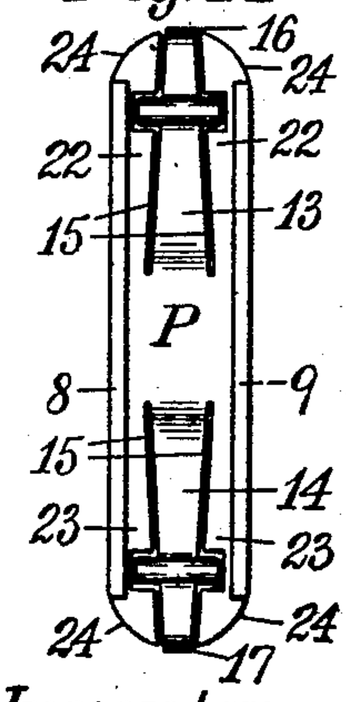



Fig. 14

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W. H. Honiss.

49 Magazines.

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NO MODEL. 2 SHEETS—SHEET 1.



Fig. 1

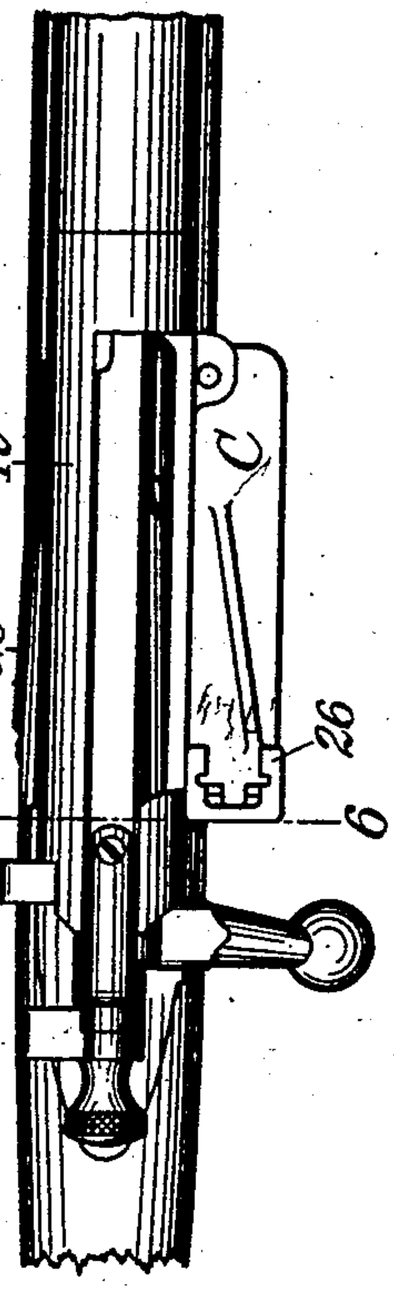



Fig. 2

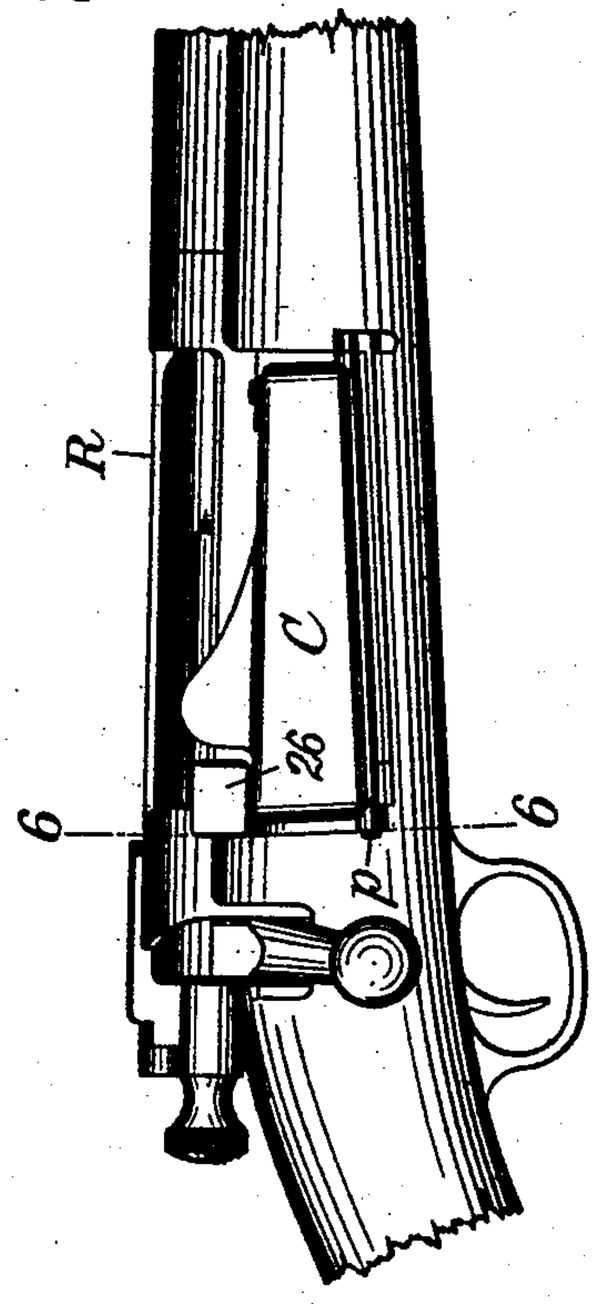



Fig. 3

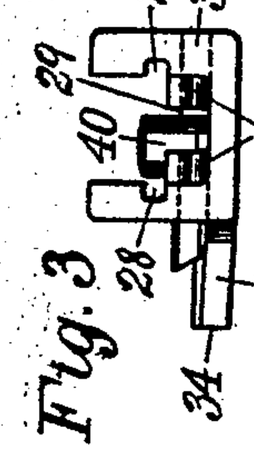



Fig. 4

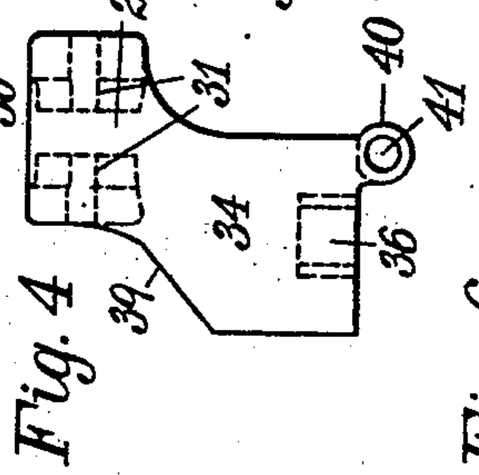



Fig. 5

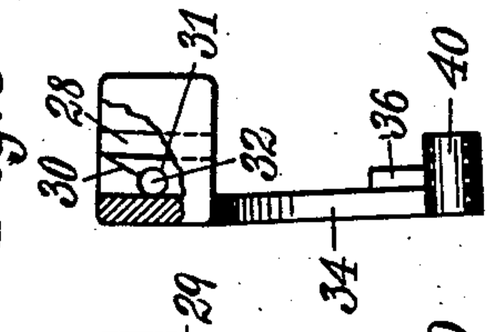



Fig. 6

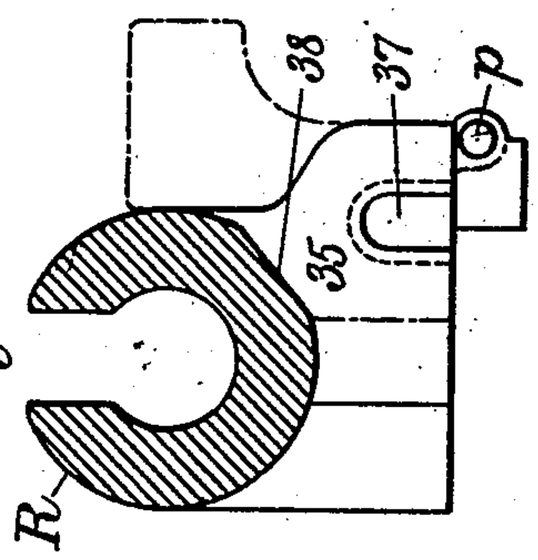
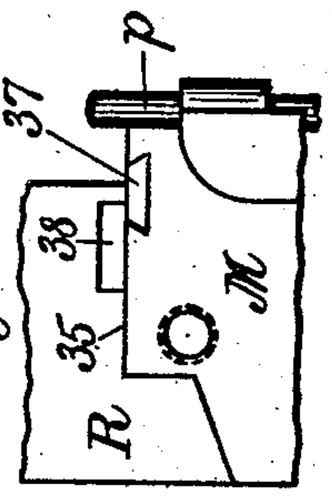



Fig. 7

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# UNITED STATES PATENT OFFICE.

EDWARD G. PARKHURST, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO LYMAN E. WARREN, OF NEW YORK, N. Y.; JULIA E. PARKHURST EXECUTRIX OF SAID EDWARD G. PARKHURST, DECEASED.

## MAGAZINE BOLT-GUN.

SPECIFICATION forming part of Letters Patent No. 719,254, dated January 27, 1903.

Application filed November 2, 1898. Serial No. 695,312. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD G. PARKHURST, a citizen of the United States of America, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Magazine Bolt-Guns, of which the following is a specification.

This invention relates to improved means for charging the magazines of breech-loading firearms of the Krag-Jorgensen type, the general object of the invention being to provide simple and effective means for inserting at a single operation a file of cartridges from a locked filler or packet into the magazines of firearms of this type in any desired position thereof with relation to the vertical.

More specifically the objects of the invention are to provide means for receiving and supporting one of the aforesaid locked cartridge-packets in proper relation to the magazine-inlet for coöperating with the locker of the packet to retract it from its locking position, to retain it in its retracted position, and thereby retain the packet in charging position.

A further object is to arrange the devices for supporting the packet in such a relation to the magazine-cover that the operation of closing the latter after completing the charging of the magazine will automatically eject the emptied packet entirely clear of the firearm.

Still another object of this invention is to particularly adapt these improvements to that form of the Krag-Jorgensen type of firearm which is adopted by the United States Army and known as the "Army model of 1892," embodying these improvements in attachments which may at comparatively small cost be applied to the many thousands of firearms of this model which have already been manufactured for the army service, the magazines of which have hitherto been charged by hand with single loose cartridges.

Figure 1 of the drawings is a plan view, and Fig. 2 is a side view, both in reduced scale, showing the external appearance of a firearm of the well-known Krag-Jorgensen type having the devices of my present invention applied thereto. Fig. 3 is a plan view, Fig. 4 a rearward view, and Fig. 5 a side view, of the improved holder, locker-actuator, and detent-seat for the cartridge holder or packet. In Fig. 5 a portion of the side wall of the holder is broken away in order to show the locker-actuator and detent-recess more clearly. Fig. 6 is a rearward view in approximately full-sized scale of the receiver of this type of gun in section, taken on the line 6 6 of Figs. 1 and 2, showing the seats which are cut therein to receive the filler-holder of Figs. 3, 4, and 5, the outline of which is shown in dot-and-dash lines. Fig. 7 is an underneath view of the receiver of Fig. 6. Fig. 8 is a plan view of the magazine portion of this type of gun, showing the cover in its open position and showing also the direction and relative position in which the cartridges are fed through the magazine toward the firing-chamber of the gun. Fig. 9 is a side view projected from Fig. 8, showing in addition thereto a file or packet of cartridges applied in charging position upon the magazine, the holder for the cartridge-packet being shown in section, taken on the line 9 of Fig. 8. Figs. 10 and 11 are rearward views in section taken on the line 10.11 of Fig. 9. Fig. 10 represents the parts in the position shown in Fig. 9, the magazine-cover being wide open and the follower retracted in suitable position for receiving the file of cartridges from the packet, two of which are here shown emerging therefrom. Fig. 11 shows the magazine after the cartridges have been transferred thereto and the magazine-cover partly closed, illustrating the operation of ejecting the emptied packet. Figs. 12, 13, and 14 are rear views of the packet which I prefer to employ in connection with these devices. Fig. 12 is a rear view, and Fig. 13 is a side view in section taken on the line 13 13 of Fig. 12, showing the packet filled with cartridges. Fig. 14 is a front view of the empty packet, showing the cartridge-head-receiving flanges.

The construction and organization of the Krag-Jorgensen type of firearm present features of peculiar difficulty in the way of char-

ıg the magazines thereof with packets of ırtridges. The magazine-chamber of this ′pe extends laterally beneath the receiver, ; shown in Fig. 11, instead of being vertical nd in line therewith, as in the Lee type of ıagazine, each foremost cartridge rising from ıe magazine through a narrow spiral pas-ıge as it is carried forward by the breech-olt into the firing-chamber of the gun. This assage is too narrow and tortuous to permit ıe cartridges to be fed in packet form in the sual manner backwardly into the magazine gainst the pressure of the cartridge-follower ereof, and it has, to the best of my knowl-dge and belief, been considered necessary p to the present time to charge magazines f this type with loose cartridges applied ingly at the side of the magazine and in front f the cartridge-follower thereof through an perture made by turning back the hinged over of the magazine, the firearm being nec-ssarily held in an approximately level posi-ion in order to prevent the cartridges from olling or falling out. On account of the lo-ation at which the cartridges are inserted he charging operation must be performed in his type of firearm without the coöperating esistance which, in the case of magazines of he Lee type, would be afforded by the spring f the cartridge follower or elevator. With-ut this resistance the cartridges would, if llowed to drop freely from the packet upon etracting the locker, be liable to separate nd become crossed or otherwise displaced. Vhere, as in the case of the United States ırmy model above referred to, the cartridges mployed are of the type having projecting ims of a diameter larger than that of the car-ridge-body, as shown in Fig. 8, it is necessary hat these cartridges shall invariably lie in the nagazine as represented in that figure, with he rim of each succeeding cartridge project-ng behind the rim of its predecessor. If the im of the foremost cartridge should project ehind the rim of the succeeding cartridge, he latter would effectively block the forward ovement of the bolt required to carry the oremost cartridge from the magazine into he firing-chamber of the gun. It is there-ore necessary in charging such a magazine vith rimmed cartridges to incline the top of he firearm slightly to the left, as viewed in ′ig. 10, in order to have the successive car-ridges roll to their proper relative position ınd to retain them therein, so as to guard ıgainst the difficulties just referred to. These lifficulties are overcome by me partly by im-ıroved features of the aforesaid cartridge-ıacket, partly by features resident in the ıresent invention, and by the coördination ınd coöperation of both, as will be herein-ıfter described, so that the firearm may be ıroperly charged in any position.

Before describing in detail the features of he present invention a brief description will ıe given of the cartridge-packet with which the present devices are adapted to coöperate and which is shown in the accompanying drawings to a sufficient extent to enable its construction and coöperation to be understood. This improved cartridge-packet is preferably formed from a single piece of sheet metal, preferably spring-steel, having the side flanges 8 and 9, which form, in combination with the rear wall 12, a cartridge-head-receiving channel 10 for receiving and guiding the cartridge heads or rims. The rear wall 12 of the body of the filler is slit or punched along the lines 15, so as to form the resilient tongues 13 and 14, which perform the combined functions of locking the cartridges in position in the holder when used as a cartridge-packet and of retaining the clip in its charging position relative to the magazine. The ends of these tongues project somewhat beyond the ends of the rear wall 12 and are turned forwardly and downwardly to form the locking faces or hooks 16 and 17, which project forwardly across the plane of the cartridge-channel 10 and substantially at right angles thereto; so that when the packet is filled with cartridges the locking-faces project over the rims ′ of the terminal members of the file of cartridges, thus locking the ends of the packet and securely retaining the cartridges therein throughout its service as a cartridge-packet. The slitting or shearing of the rear wall 12 incidental to the formation of the locker-detents 13 and 14 serves to bifurcate the ends of the packet, forming the oppositely-disposed resilient pairs of clasps 22 and 23 for the rims of the terminal cartridges, so that the latter will be held in their proper position with sufficient tension to impart a suitable degree of firmness to the file for greater convenience and security when handled as a packet. This edgewise clasping of the terminal members of the file of cartridges serves also a useful purpose in connection with the charging of magazines of the class now under consideration, inasmuch as it may be utilized to support the file of cartridges in the position shown in Fig. 9 even after the locker is retracted and while the operator's thumb is being moved to the top of the uppermost cartridge, so that the entire file of cartridges may be transferred bodily to the magazine without becoming separated, thereby preventing the displacement to which, as hereinbefore described, cartridges of the rimmed type are peculiarly liable in charging this type of firearm.

Having thus described the relevant features of my improved cartridge-packet, I will now describe the devices of the present invention for coöperating therewith.

The receiver R, the magazine M, the magazine-cover C, hinged to the magazine by means of the pintle *p*, and the follower F of the gun as herein represented are substantially like those of the United States Army model of 1892, hereinbefore referred to, the cover and the

follower being shown in Figs. 8, 10, and 11 in their open position for receiving the charge of cartridges. This position of the parts is the same as that in which they are now charged by hand.

My improved means for receiving and supporting the cartridge packet or filler P in suitable charging relation to the magazine for retracting the leading locker thereof and for cooperating with the said locker as a detent for retaining the filler endwise in position during the charging operation is preferably made in an integral piece 26, which is herein designated as a "packet-holder." This is attached to or integral with the receiver of the firearm at the rearward end of the magazine, over which it projects far enough to support the packet in its proper charging position. The holder is provided with the channels 27 and 28 for receiving the body portion of the packet. These channels are made at a suitable angle from the vertical so as to hold the lowermost cartridge of the packet in substantially parallel relation to the magazine or with its point somewhat lower than its rim. The longitudinal position of the channels 27 and 28 with relation to the magazine is such that the lowermost cartridge in the packet is substantially behind the position occupied by it after falling therefrom into the magazine, the rearward walls of which being inclined, as shown in the plan view of Fig. 8, serve to push the cartridges forward as they progress through the magazine, thereby insuring that the rim of each cartridge shall lie behind that of its predecessor. The holder is milled away rearwardly of the channels to form the passage 29 for the lockers 13 and 14 of the filler, and the side walls of that passage are cut away to form the inclines 30, which serve as the locker-actuators and which engage with the arms 20 or 21 of the locker as the packet is pushed to its seat in the holder.

As a means for coöperating with the arms 20 and 21 in their capacity as detents for retaining the filler in position in its holder the side walls of the passage 29 below the inclines 30 are recessed to form the rounded seats 31. These recessed seats are most readily formed by drilling a round hole 32 entirely through the holder before cutting away the walls to form the inclines 30, the forming of which is, in fact, greatly facilitated by the presence of the hole 32. The arms 20 and 21 are preferably curved in coincidence with the circle of the hole 32, so as to engage snugly therein, as shown in Fig. 9, the lower wall of the hole 32 serving as a stop for the downward movement of the locker, and hence of the packet itself, thus determining its lowest or charging position, which, as best shown in Fig. 10, is with its lower end within the sweep or path of movement of the magazine-cover C in order that the latter in closing will eject the packet from the holder. These recessed or rounded seats serve to retain the packet against accidental displacement during the charging operation, while yielding readily to the above-described automatic ejecting operation of the magazine-cover.

In order to guide the file of cartridges from their vertical position in the packet into the horizontally-located magazine M of the firearm, as best shown in Figs. 10 and 11, means are provided for deflecting each succeeding cartridge toward the left in order that the force applied by the thumb of the operator on the foremost cartridge shall be communicated to the entire file around the angle of the L-shaped path of its movement. In the ordinary operation of charging this type of magazine by hand the sidewise movement is readily imparted by the finger or thumb of the operator to each single independent cartridge as it is inserted; but in charging the magazine from a packet it becomes necessary to provide mechanical deflecting means for this purpose. This means consists of the deflector-plate 33, which extends to the right from the lower wall of the magazine rearwardly of the cartridge follower or elevator F and upwardly at an angle of substantially forty-five degrees, being so located with relation to the vertical file of cartridges in the packet as to deflect the heads of each succeeding member thereof toward the left into the magazine, as shown in Fig. 11. Thus the pressure applied by the thumb of the operator to the rearmost cartridge is made to operate through the L-shaped path followed by the cartridges. The retracted follower F serves, as at present, as a guard to prevent the cartridges from dropping into the magazine-cover C and also serves to deflect the points of the cartridges into the magazine, thus coöperating with the deflector 33.

These devices as thus far described may be applied to firearms of this general type, either integrally or otherwise, as may be most expedient. I will now describe the particular adaptation by which they may be applied, at a trifling individual cost, to the many thousands of these firearms which have already been manufactured for the United States Army service, in order to enable them to be charged with packets of cartridges instead of single cartridges. In its adaptation for this purpose the filler-holder 26 is provided with a base-plate 34, which is designed to be attached to the outer side of the rearward wall 35 of the magazine, as best shown in Figs. 1, 2, and 9. The base-plate is provided with a dovetailed projection 36, which is fitted in a correspondingly-dovetailed recess 37 in the rearward wall 35, being pushed into position from below. The cylindrical body of the receiver R is milled away at 38 so as to form a slot, into which the corresponding portion 39 of the base-plate extends, thereby firmly supporting the upper end of the filler-holder. The latter is also provided with a hub 40, having a hole 41 which when the filler-holder has been pushed upwardly in its proper position in the dove

tailed recess 37 and the slot 38 comes in line with the hinge-pintle *p* of the magazine-cover, so that the latter is utilized as a bolt for locking the packet-holder in position by extending through the hole 41. As thus constructed the holder may be quickly and firmly attached without the use of any holding-screws or similar devices, and the work of assembling and disassembling may be performed entirely without tools.

The deflector 33 may be substituted for the guard-plate now employed in the magazine of the Krag-Jorgensen gun, which extends outwardly from the lower wall of the magazine merely to prevent the cartridges from dropping into or through the opening between the magazine and the follower made by opening the cover C, and it may be attached to the floor of the magazine by means of rivets similar to those which formerly held the guard-plate.

In order to enable the packet to be automatically detached from the firearm when empty, it is provided with beveled or rounded corners 24, the packet being supported by its holder in such a position as to bring one of these rounded or beveled corners of the packet into the path of the closing movement of the magazine-cover C, which upon coming in contact therewith, as shown by the dot-and-dash lines in Fig. 10, immediately ejects the packet by forcing the locker upwardly out of its detent-seat 31, after which the blow imparted by the cover, supplemented by the contracting action of the packet-locker against the inclines 30, serves to project the emptied packet entirely clear of the firearm, giving it a fillip toward the right, so that it ordinarily falls to the ground on the right-hand side of the firearm.

The operation of charging a magazine of this type with one of my improved cartridge-packets is as follows: The body portion of the packet is inserted into the channels 27 and 28 of the holder and is pressed downwardly to the position shown in Figs. 9 and 10, the arms 21 of the locker 14 sliding over the inclines 30 and into the recesses 31, in which position the locking-face 17 is withdrawn from the plane of the cartridge-rims. They are, however, still retained in place in the packet by the tension of the clasps 22 or 23, or both, against the edges of the lowermost cartridge-rim, being thus held until the operator by placing his thumb upon the uppermost cartridge carries the entire file at one stroke into the magazine, the cartridges following one another so rapidly that no opportunity is given them for falling apart and becoming relatively displaced. As they progress through the magazine they are pushed forward by the inclined rearward wall of the magazine, so that as each cartridge emerges from the packet its rim falls behind that of the preceding cartridge. As the foremost cartridge falls it strikes the deflector 33 and the follower F in practically the position occupied by the cartridge $c^2$ of Fig. 11 and is moved aside by the deflector and the follower F to the position occupied by the cartridge $c'$ in Fig. 10, thereby enabling the succeeding cartridge to give it an impulse toward the left. As the last cartridge passes from the packet into the magazine the cover C of the latter is quickly closed by the operator, serving, as already described, to sharply eject the emptied packet clear of the firearm. It is not necessary that the packet should fit closely in its channels 27 and 28. In fact, it is preferably fitted somewhat loosely, so as to facilitate the entering operation. Although it may thus be entered freely, it will be firmly held to place upon arriving at its proper position shown in Fig. 9 by the tension exerted by the resilient locker-detent 14 against the seats 31.

A firearm of this type when provided with these devices may be loaded quickly and with certainty in whatever position it may be held. A soldier lying upon his side or even upon his back with the firearm held above him upside down may charge its magazine with one of these cartridge-packets as quickly and readily as the firearm can now be charged right side up with a single cartridge, the only position in which it has hitherto been considered possible to charge the magazine of this type of firearm. The packet-holder 26 is also of great utility in loading the packets with cartridges at the factory or armory. By attaching it to a block or otherwise securing it firmly to place upon a bench or table it serves to hold the packets in position for loading. It may for this purpose be inverted or placed upon its side in any way most convenient for the loading operation, the function performed by it being exactly like that herein shown and described—namely, to hold the packet and to unlock one of its ends. By thus supporting the packet-holder in a fixed position the operator may employ both hands for handling the cartridges. The movement of inserting the last cartridge in the packet may be made to serve also for detaching the completed packet from the holder, the contact of the foremost cartridge with the locker at the opposite end serving then to push the packet out of its holder.

I claim as my invention—

1. The combination with a firearm-magazine of the described type, of means for charging the magazine from a cartridge-packet, consisting of a holder for receiving and supporting the packet with its lowermost cartridge located at one side of the position of the rearmost cartridge in the magazine, and means for deflecting the succeeding cartridges sidewise into the magazine from their direction of emergence from the packet.

2. In combination with a firearm-magazine provided with a swinging cover, a holder adapted to support a cartridge-packet for longitudinal movement with the lower inclined end of the packet located in the path of swinging movement of the cover, whereby the

packet is automatically ejected in a longitudinal movement by the closing movement of the cover.

3. A holder for the described locking cartridge-packet, comprising channels for receiving the body of the packet, and an actuating-incline for retracting the locker-detent, terminating in a recess for coöperating with the locker-detent to stop the packet at its charging position, to yieldingly retain it in that position, and to permit its automatic ejection, and means for ejecting the packet in a backward or return direction.

4. In a magazine of the class specified, in combination with the follower thereof, means for supporting a cartridge-packet adjacent to the retracted position of the follower and for holding the packet in a plane at an angle to that of the magazine-chamber, and a deflector for coöperating with the follower to guide the succeeding cartridges laterally from the packet into the magazine-chamber, during the charging operation.

5. In combination with the magazine of the class specified, provided with a follower, a packet-holder for supporting the cartridge, in a plane immediately in front of the retracted follower and substantially at right angles to the plane of the magazine-chamber and of the path of movement of the follower, and an angular deflector intersecting the two planes at substantially equal angles for coöperating with the follower to guide the succeeding cartridges from the packet to the magazine.

6. A detachable packet-holder for the purpose specified, comprising, in an integral piece, packet-receiving channels, a packet-locker-actuating incline, terminating in a recess for yieldingly detaining the locker for allowing of its ejection in a return direction, and means removably attaching the packet-holder to a firearm.

7. A detachable packet-holder for the purpose specified, comprising in an integral piece packet-receiving channels, a locker-actuating incline, a detent-recess, and a base-plate having a dovetailed projection for detachably engaging with the receiver of a firearm.

8. A detachable packet-holder for the purpose specified, comprising in an integral piece means for receiving and detaining the packet, and for retracting the locker thereof, and a base-plate having a dovetailed projection for detachably engaging with the receiver, and having an aperture for receiving the hinge-pintle of the firearm when assembled thereon.

Signed by me at Hartford, Connecticut, this 26th day of October, 1898.

EDWARD G. PARKHURST.

Witnesses:

JENNIE NELLIS,

W. H. HONISS.