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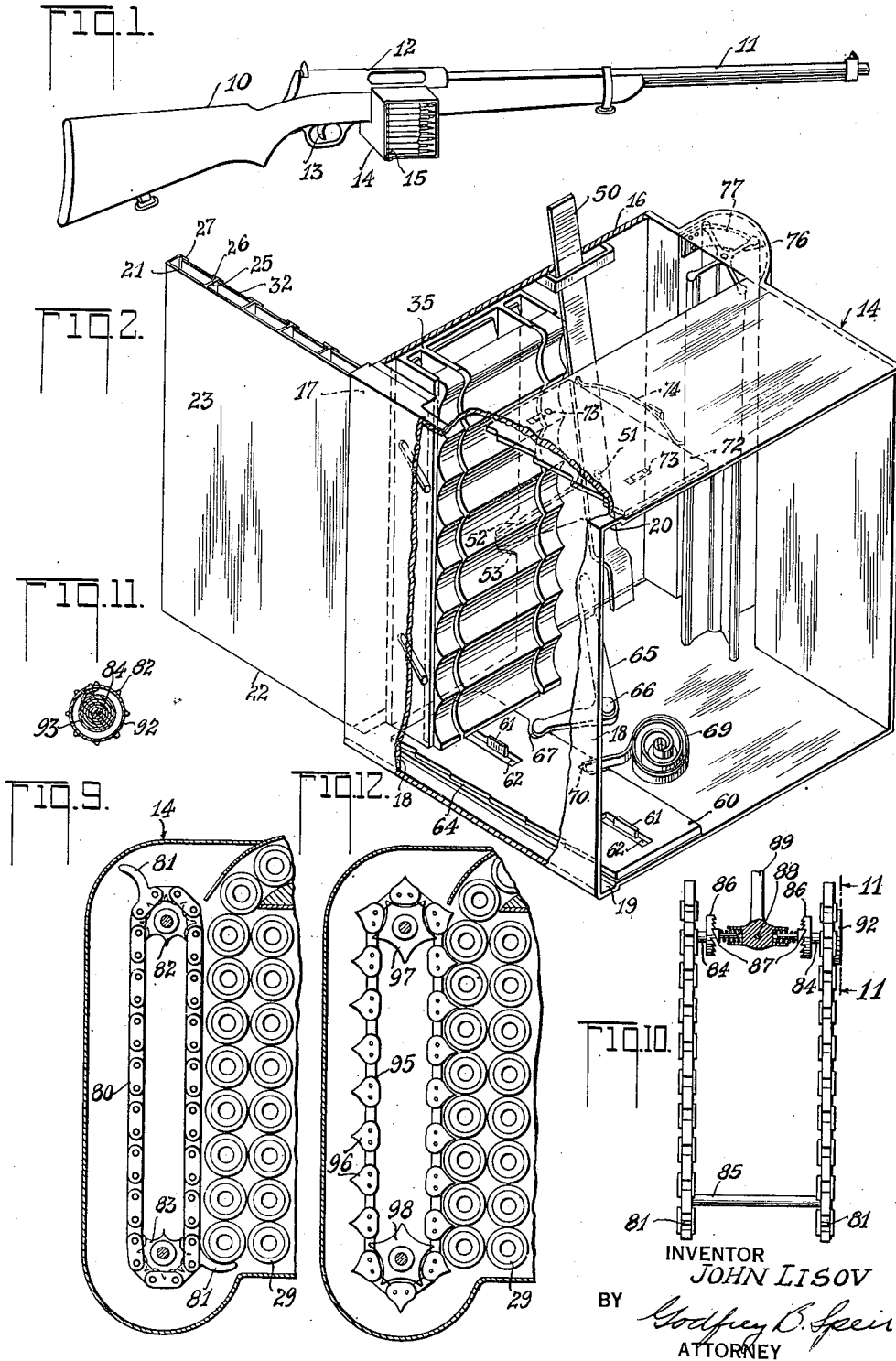
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MAGAZINE FOR FIREARMS

Filed June 9, 1938

2 Sheets-Sheet 1



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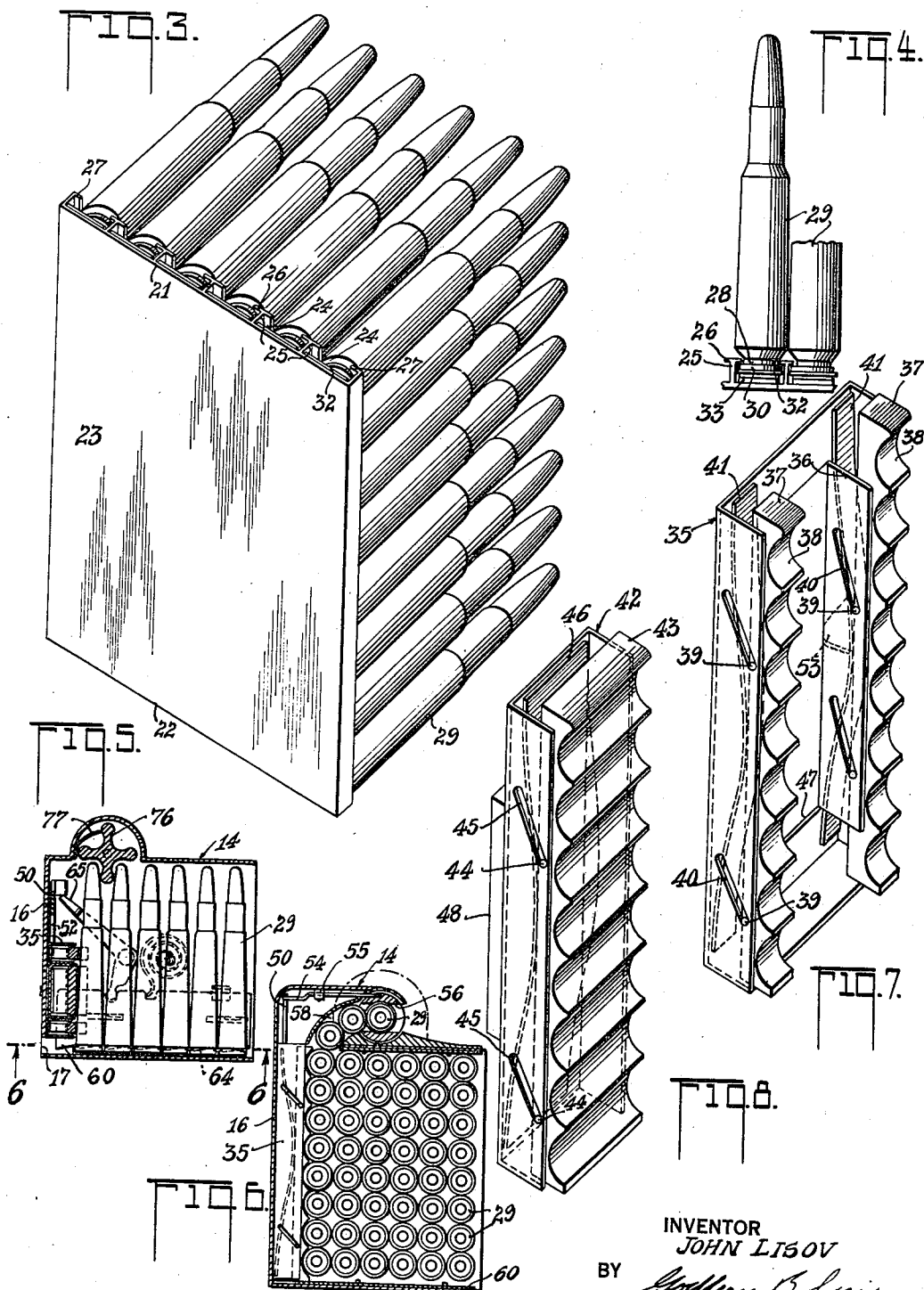
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MAGAZINE FOR FIREARMS

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19 Claims. (Cl. 89—33)

This invention relates to magazines for repeating firearms, and is particularly concerned with an improved form of magazine housing, cartridge clip, and means for feeding cartridges to the firearm, the latter being of any suitable type adapted for either automatic, autoloading, or manual loading operation.

Objects of the invention are generally as follows: (a) To provide a magazine adapted to be loaded with a plurality of cartridges assembled in a plurality of vertical rows in a clip; (b) to provide a side opening magazine housing within which a cartridge clip is adapted to be inserted; (c) to provide a magazine clip having a plurality of vertical parallel channels in each of which a row of cartridges is adapted to be assembled; (d) to provide operating mechanism in accordance with object (c) whereby the cartridges of each row are sequentially fed to the firearm and to provide further, mechanism for indexing the clip laterally so that when one row of cartridges is exhausted, the following row will automatically be brought into position for feeding in response to actuation of the firearm; (e) to provide means in the firearm by which a cartridge clip may pass laterally therethrough as the ammunition therein is expended; (f) to provide means for coincidentally indexing cartridges in a vertical row to the gun, and to move an adjacent row of cartridges into position upon exhaustion of the first row; (g) to provide appropriate structure for holding cartridges in a clip in a plurality of vertical parallel rows; (h) to provide a special form of cartridge base, and a coacting clip, so that adjacent rows of cartridges lie in contact with one another in order to minimize the space occupied by a loaded clip; (i) to provide a cartridge base of special form; (j) to provide means for holding rows of clipped cartridges in parallel relationship and in such a position as to be firmly held for feeding to a firearm action; and (k) to provide vertical feeding mechanism for a row of cartridges so arranged that all of the cartridges in a row are indexed toward the gun action, positively, upon expenditure of a round of ammunition and actuation of the gun reloading mechanism.

Further objects will be apparent from a reading of the specification and claims, together with an examination of the accompanying drawings, in which:

Fig. 1 is a perspective elevation of a typical firearm embodying the invention;

Fig. 2 is a perspective elevation, partly broken away, showing the details of construction of a

magazine housing and cartridge feeding mechanism;

Fig. 3 is a perspective elevation of a loaded cartridge clip;

Fig. 4 is a fragmentary plan of the clip showing the engagement of ammunition therewith;

Fig. 5 is a sectional plan of the magazine housing, clip, and actuating mechanism;

Fig. 6 is a section on the line 6—6 of Fig. 5;

Figs. 7 and 8 are respectively perspective views of parts of the feeding mechanism;

Fig. 9 is a sectional elevation of an alternate feeding mechanism;

Fig. 10 is a side elevation of the feeding mechanism of Fig. 9;

Fig. 11 is a section on the line 11—11 of Fig. 10, and

Fig. 12 is a sectional elevation of an alternate type of feeding mechanism.

In Fig. 1 is shown a typical autoloading shoulder rifle 10 having a conventional barrel 11, receiver 12 and trigger 13, a magazine housing 14 being permanently attached to the arm below the receiver 12, said magazine being adapted to receive a clip 15 of loaded cartridges. It will be noted that the housing 14 comprises a substantially rectangular box, the left hand side of which, as shown, extends a short distance beyond the left side of the stock of the arm, and the right open side of the box extends a short distance to the right of the stock. The housing 14 is provided with a left side partition 16 completely covering the left side thereof except for a vertical slot 17, the purpose of which will hereinafter be disclosed.

The upper and lower borders of the rear wall 18 of the housing 14 are provided with transverse tracks 19 and 20 arranged to receive the upper and lower borders 21 and 22 of a magazine clip 23, the latter being of substantially rectangular form and having, on its forward face, a plurality of vertical, parallel channels 24 defined by rails 25. The intermediate rails have oppositely facing flanges 26, while the end rails have inwardly facing flanges 27, the flanges engaging in a groove 28 formed at the base of a more or less conventional cartridge 29. At the cartridge base, below the groove 28, a flange 30 is formed, this flange being preferably of a diameter less than the largest diameter of the cartridge 29. In conventional ammunition, a base flange is provided which either extends beyond the diameter of the cartridge case or is of the same diameter; in the latter case, a groove separates the flange from the case proper. For the purpose of reducing the amount of space taken up by a loaded clip, the

flange 30 is of a diameter sufficiently smaller than the cartridge case so that the rails 25 may lie between adjacent rows of cartridges while still permitting the cases proper to lie one against the other, as shown in Fig. 4. When a plurality of vertical rows of ammunition are assembled in the clip, the cartridges abut one another horizontally, which would not be possible if the flanges 30 were of a full cartridge diameter. Thus, approximately one-sixteenth of an inch is saved between adjacent vertical rows of ammunition, and the clip, with cartridges assembled therein, is compact and easily handled.

Within each channel 24 is a bearing plate 32 backed up by a leaf spring 33 by which the cartridges are resiliently held against the flanges 26 to prevent their inadvertent removal. As shown in Fig. 3, the clip holds six vertical rows of cartridges of eight each, the height of the clip 23 being sufficiently greater than the sum of the diameters of eight cartridges so that the top and bottom borders 21 and 22 of the clip may engage within the magazine housing grooves 19 and 20.

Against the left hand plate 16 of the housing, a channel member 35 is nested. Wings 36 are upset from the web of the member 35, defining guide-ways between themselves and the flanges of the member 35, and leaving therebetween a rectangular opening 47. The space between the flanges of the member carry racks 37 for vertical and lateral movement. These racks are provided with corrugations or scallops 38, the pitch of which is the same as the diameter of the cartridges to be used. Pins 39 pass through the racks 38 and engage oblique slots 40 formed in the channel flanges, and each rack is backed up by a leaf spring 41 which urges each rack outwardly and downwardly with respect to the member 35. Between the racks 38 and the flanges of the channel 35 is disposed a channel 42 in which another rack 43 is slidable, the latter carrying pins 44 slidable in oblique slots 45 in the flanges of the channel 42. This rack 43 is backed up by a leaf spring 46 tending to urge the rack 43 outwardly and downwardly relative to the channel 42 in virtue of the pin-slot connection 44, 45. The channel 42 is firmly attached, through a rectangular boss 48, to the left hand partition 16 of the magazine housing, this boss passing through the rectangular opening 47 and thus providing a support and guide for the member 35, which latter is capable of vertical movement relative to the channel 42.

An operating arm 50 is pivoted at 51 to the plate 16 and carries a bell crank projection 52 engaging a suitable slot 53 in the web of the member 35. Upon forward and rearward actuation of the arm 50, the member 35 is moved up and down. The top part of the arm 50 is actuated by a lever 54 pivoted at 55 to the top of the magazine housing, as shown in Fig. 6, the end of the lever 54 engaging a portion of the bolt or slide 56 forming part of the gun action. It will be apparent that reciprocation of the sliding member 56 of the gun action will rock the lever 54 about its pivot and will index the arm 50. If a clip full of cartridges is engaged within the magazine housing, one row of cartridges will nest against the racks 37 and 43, and the clip is anchored from movement away from the racks by means presently to be described. When the arm 50, referring to Fig. 2, is moved forwardly, the racks 37 will be moved upwardly, moving all cartridges of the row upwardly by an amount equivalent to the diameter of one cartridge. During such move-

ment, the rack 43 springs upwardly and away from the cartridge row, re-engaging the cartridges upon cessation of movement of the arm 50. Upon return movement of the arm, the rack 43 holds the row of cartridges from downward movement and the racks 37 move away from the row, re-engaging the remaining cartridges when the arm 50 comes to rest in its rearward position. Thus, by sequential movement of the arm 50 forwardly and rearwardly, the cartridges of the row will be indexed upwardly into a feed chute 58, shown in Fig. 6, to the receiver of the firearm.

Now, it will be apparent that it is necessary to move the magazine clip 23 laterally upon exhaustion of any one row of cartridges, in order that a full row may be brought to bear against the racks 37 and 43. To this end, I provide a plate 60 on the floor of the magazine housing, the latter having pin-slot connections 61, 62 with the magazine floor to permit of lateral sliding of the plate 60 and a slight amount of fore and aft movement. The plate 60 has ratchet notches 64 in its rearward edge, the points of which are adapted to bear upon the lower ends of the flanges 26 in the magazine clip. A bell crank 65, pivoted at 66 to the magazine floor, is engageable at one end with the lower end of the arm 50, and engages at its other end in a notch 67 in the plate 60. A spring 69, anchored to the magazine floor, engages a notch 70 in the plate 60 and constantly resiliently urges the plate 60 to the left, as shown in Fig. 2. Now, if the clip 23 be assembled in the magazine housing, and if there be an empty row or channel of ammunition on the left side of the clip, the spring 69 will urge the clip leftwardly in virtue of the engagement of the ratchet teeth 64 of the plate 60 with the clip. Upon the next reciprocation of the gun bolt, the arm 50 will be moved forwardly to feed a cartridge to the gun and at this time, the arm addresses the bell crank 65, forcibly translating the plate 60 toward the right, during which action said plate clicks over the flanges 26 of the magazine to re-engage said flanges in such a position that the spring 69 will again urge the clip 23 toward the left. To prevent rightward movement of the clip during this action, a ratchet plate 72 is carried on the top plate of the housing 14 on fore and aft pin-slot connections 73, the plate 72 being urged rearwardly by the spring 74. This plate 72, due to its engagement with the magazine clip, always prevents rightward movement of the clip during the period when the bottom plate 60 does not positively engage same.

The bell crank 65 floats free from the arm 50 during the feeding of cartridges from any one row or channel in the clip 23, and is only operated when such a row is emptied of cartridges and when it is necessary to index the clip laterally to bring a new row of cartridges into engagement with the racks.

During the process of feeding cartridges from any one row, it will be appreciated that considerable rightward pressure is exerted on the cartridges by the racks 37 and 43. Although the cartridges are firmly supported at their bases by their engagement in the channels 24 of the clip, a forward support means is desirable to assure smooth operation of the mechanism. Accordingly, I provide an elongated star wheel 76 journaled at its upper and lower ends in the top and bottom plates of the housing 14. This wheel is freely rotatable about its axis in one direction—clockwise, as shown in Fig. 5—and is restrained from opposite rotation by a spring 75

pawl 77 attached to the housing and adapted to bear on an inactive spoke of the star wheel. When the clip 23 is indexed to the left, the wheel 76 will turn as the forward ends of cartridges bear upon a spoke, and upon completion of the indexing operation, the pawl 77 will lock the wheel from reverse rotation. Thereupon, the forward ends of these cartridges in the leftward row will bear upon a spoke of the wheel during feeding of the cartridges by the racks, preventing cartridges from rightward displacement.

During operation of the magazine, the clip will move to the left as successive rows of cartridges are discharged therefrom, and will pass through the slot 17 in the left rear end of the housing 14, dropping clear thereof when the clip is exhausted. At any time after a clip of cartridges has started its leftward movement through the magazine housing, a fresh clip may be inserted through the open right hand side of the housing, and the ratchet plates 60 and 72 will hold the new clip in place for automatic indexing with that partially unloaded clip which is all ready in action. Accordingly, the new clip will come into action as soon as the old clip is exhausted, with no need of a separate loading or threading operation as is common to conventional weapons. Some conventional weapons include clipped or belted ammunition, and upon exhaustion of one clip or belt, a full one must be inserted and threaded into the gun, causing an interruption in gun fire. In this case, as pointed out above, a new clip may be started into the magazine before exhaustion of the old clip and the gunner is thereby assured of a constant supply of ammunition without the possibility of exhausting a clip or belt when, possibly, the delay according to the old method may be dangerous or embarrassing.

As indicated in the first part of the specification, this system of loading may be applied to any conventional arm, and is not confined to any one type. It may readily be adapted for use with machine guns, with autoloading rifles, or with conventional manually operated repeating rifles. It may be further noted that the magazine housing 14 is disposed substantially symmetrically with respect to the vertical plane passing through the barrel axis, so that there is a minimum of canting of the gun due to the influence of magazine unbalance. This is particularly true when a fully loaded cartridge clip is in position on the gun. In the embodiment chosen for illustration, the magazine clip holds forty-eight cartridges in extremely compact and readily portable arrangement. In any other magazine arrangement capable of holding a number of cartridges of this order, the bulk of the container is greater than the bulk of the cartridges, and the redundant structure necessary to carry the cartridges imposes an additional burden on a gunner or his aids.

In Figs. 9, 10 and 11 I show an alternative vertical feeding arrangement for the cartridges, a chain 80 having dogs 81 running over a drive sprocket 82 and an idler sprocket 83 respectively carried on shafts 84 and 85 journaled in the magazine housing 14. A drive for the shafts 84 is afforded through ratchet wheels 86 carried on said shaft and indexed by pawls 87 carried on a rocker shaft 88 which includes an arm 89 operated by a mechanism such as a lever 54 in Fig. 6 connecting with the gun bolt 56. In order to take up the slack between the period when one dog 81 passes its topmost position and the other dog 81 engages the bottom cartridge of a row to

be fed, a spring drum 92 carries the sprocket 82 and is freely journaled on the shaft 84. A coil spring 93 forms a driving connection from the shaft 84 to the drum 92, constantly urging the chain 80 toward rotation. The pitch of the teeth in the ratchet wheel 86 will be such as to produce a rotation of the shaft 84 slightly in excess of that necessary to index the chain 80 for feeding one cartridge. Thus, as the gun is actuated, the arm 89 will continually tend to wind up the spring 93 until such time as the dog 81 feeds the last cartridge of a row. Then, by the wind-up in the spring, the next dog 81 in the chain will snap around the end of the chain run to engage the bottom cartridge of a new row, which row, in the interim, has been indexed into position for feeding.

Fig. 12 shows still another alternative vertical feeding organization in which a chain run 95 carries dogs 96 pitched a distance apart equivalent to the diameter of a single cartridge. The chain 95 runs over a drive sprocket 97 and an idler sprocket 98 carried on shafts journaled in the magazine housing, and drive to the sprocket 97 may be effected by a ratchet and pawl mechanism similar to that shown in Fig. 10, eliminating, however, the spring and drum elements 92 and 93. In this embodiment, the teeth of the ratchet wheels 86 would be pitched to produce movement of the chain equivalent to one cartridge diameter for each complete oscillation of the operating arm such as 89.

In the arrangement of this magazine system on a gun, it is preferred to so dispose the operating arm 50 or the operating arm 89 as to be operated in a forward direction by the gun bolt during approximately the last quarter or third of its rearward travel. Thus, the initial travel of the bolt permits of ejection of a fired cartridge case prior to feeding of a loaded cartridge. The bolt, in its conventional forward movement, drives the loaded cartridge into the chamber of the gun in preparation for firing. The last phase of forward bolt movement will complete the operating cycle of the arm 50, positioning same in readiness for the reloading operation.

While I have described my invention in detail in its present preferred embodiment, it will be obvious to those skilled in the art, after understanding my invention, that various changes and modifications may be made therein without departing from the spirit or scope thereof. I aim in the appended claims to cover all such modifications and changes.

I claim as my invention:

1. A magazine clip for firearms comprising, in combination, a support member, a plurality of parallel rails extending therefrom, opposed flanges along each rail, and rows of cartridges between the several rails, the cartridge cases of adjacent rows being in contact with one another, said cases each having a groove in its base end engaged by said flanges and having a flange of a diameter less than the diameter of the case, engaged between adjacent rails.

2. A magazine clip for firearms comprising a substantially plane member having a plurality of parallel channels formed therein, each channel being of a length such that a plurality of flanged base cartridges may be assembled therein and of a width such that assembled cartridges lie in the same plane, the so assembled rows of cartridges lying close and parallel to one another, said cartridges projecting from one side of the clip, said

channels having retaining means engaging the cartridge base flanges.

3. In combination with a firearm, a magazine housing laterally disposed on the receiver thereof, the housing being open at its side remote from the receiver, a cartridge base-clip having a plurality of substantially vertical cartridge receiving channels adapted to be inserted into said housing through said open side, means responsive to actuation of the firearm action for sequentially feeding the cartridges of each channel to the receiver, spring means to shift said clip laterally upon exhaustion of the cartridges of any one channel, and means actuated by firearm operation to reset said spring means after the latter has effected clip movement.

4. In combination with a firearm, a member longitudinally slidable during gun operation, a laterally disposed, open-sided magazine housing fixed to the firearm receiver, upper and lower substantially horizontal tracks in the rear of said housing, a laterally slidable cartridge clip plate engaged at its upper and lower edges by said tracks, spring means for laterally indexing said clip in said tracks, and means actuated by said slidable member for resetting said spring means after clip indexing.

5. In combination with a firearm, a member longitudinally slidable during gun operation, a laterally disposed, open-sided magazine housing fixed to the firearm receiver, upper and lower substantially horizontal tracks in the rear of said housing, a laterally slidable cartridge clip plate engaged at its upper and lower edges by said tracks, spring means for laterally indexing said clip in said tracks, and means actuated by said slidable member for resetting said spring means after clip indexing, said clip having vertically disposed channels for reception of a plurality of vertical rows of cartridges.

6. In a cartridge magazine system, a rectangular housing having one open end and an opposite end wall, a cartridge clip comprising a support plate and parallel vertical rows of cartridges carried by the plate at their bases, insertable through said end opening, a rack on said end wall engaged by the end row of clipped cartridges, means, including an arm, to index said rack upwardly to move the cartridges of the row, means to hold said cartridges from reverse movement, spring-pressed means urging said clipped cartridges toward said rack so as to bring a new row thereagainst after exhaustion of the first row, and means operated by said arm for indexing said spring-pressed means to effect re-energization of said spring.

7. In a cartridge magazine system, a rectangular housing having one open end and an opposite end wall, a cartridge clip comprising a support plate and parallel vertical rows of cartridges carried by the plate at their bases, insertable through said end opening, a rack on said end wall engaged by the end row of clipped cartridges, means, including an arm, to index said rack upwardly to move the cartridges of the row, means to hold said cartridges from reverse movement, spring-pressed means urging said clipped cartridges toward said rack so as to bring a new row thereagainst after exhaustion of the first row, means operated by said arm for indexing said spring-pressed means to effect re-energization of said spring, and means to lock said clip from movement away from said rack.

8. In a cartridge magazine system, a rectangular housing having one open end and an opposite

end wall, a cartridge clip comprising a support plate and parallel vertical rows of cartridges carried by the plate at their bases, insertable through said end opening, a rack on said end wall engaged by the end row of clipped cartridges, means, including an arm, to index said rack upwardly to move the cartridges of the row, means to hold said cartridges from reverse movement, spring-pressed means urging said clipped cartridges toward said rack so as to bring a new row thereagainst after exhaustion of the first row, means operated by said arm for indexing said spring-pressed means to effect re-energization of said spring, and means loosely engaging the forward ends of those cartridges engaging the rack, said means being movable to engage a new row of cartridge ends upon movement of the new row toward said rack.

9. In a firearm, in combination, a receiver having a barrel extending therefrom, a magazine housing below the receiver and extending laterally on each side thereof, said housing being open at one lateral end for the reception of cartridges, mechanism at the opposite end of said housing for raising cartridges sequentially to the firearm receiver, said mechanism comprising a pair of racks each engaging a plurality of cartridges, means to elevate one said rack toward the receiver in response to operation of the receiver mechanism, both said racks being resiliently urged toward the cartridges, said housing having oblique slots extending downwardly and toward the cartridges, pins on said racks engaging said slots to allow movement of the racks upward and away from the cartridges upon indexing of said one rack, whereby the cartridges move upwardly in a substantially vertical plane by elevation of said one rack and are locked alternately by said racks against downward movement.

10. In a firearm magazine, elevating mechanism for a row of cartridges comprising fixed parallel channels the flanges of each having oblique slots therein, a rack in each channel having pins engaging said slots, a spring behind each rack urging same outwardly from the channel webs, said racks being slidable in said channels as guided by said oblique slots, a second vertically reciprocable channel between said first channels, having oblique slots in its flanges, a rack embraced by the channel having pins engaging said slots, a spring behind said last mentioned rack, means to reciprocate said last channel, and a relatively fixed clip containing a vertically slidable row of cartridges, each thereof engaged by said racks, said cartridges being elevated by vertical movement of said reciprocable channel and rack during which period said other racks spring away from the cartridges, and said cartridges being retained in elevated position by the racks of said fixed channels while the reciprocable channel moves downwardly and its rack springs away from the cartridges.

11. In a cartridge elevator for a firearm, a fixed plate having an obliquely slotted channel, a movable obliquely slotted channel parallel to the first channel, a rack element in each said channel having pins engaging respective slots, a spring in each channel urging respective racks outwardly relative thereto, a cartridge clip having a row of cartridges held in engagement with said racks, the latter having scallops thereon complementary in profile to the form of said cartridges, and means actuated by the firearm for reciprocating said movable channel.

12. In a cartridge elevator for a firearm, a

fixed plate having an obliquely slotted channel, a movable obliquely slotted channel parallel to the first channel, a rack element in each said channel having pins engaging respective slots, a spring in each channel urging respective racks outwardly relative thereto, a cartridge clip having parallel vertically slidable rows of cartridges, the clip having flanged guideways gripping said cartridges by their flanged bases, means to hold an end row of cartridges against said racks, the latter having scallops therein complementary in profile to the form of said cartridges, means actuated by the firearm for reciprocating said movable channel to intermittently raise the cartridges of the rack contacted row to the firearm, spring means operable to cross feed said clip to bring a full clip row into rack contact after exhaustion of a row, and means responsive to firearm operation to reset said spring means after a cross feeding operation thereof.

13. In a firearm magazine system, a substantially rectangular magazine receptacle having lateral track grooves in its upper and lower faces adjacent the rearward face thereof, a magazine clip plate having upper and lower edges engageable in said track grooves for lateral sliding, a plurality of vertically disposed parallel cartridge base receiving channels in said plate having flanges engaging the base flanges of the cartridges whereby the cartridges are wholly carried by said clip plate, the loaded clip being insertable into said receptacle, means for holding said clip in said receptacle, and means carried by the latter engaging the forward (bullet) ends of a row of cartridges to hold them in alinement with the respective base channel.

14. In a firearm magazine system, a substantially rectangular magazine receptacle having lateral track grooves in its upper and lower faces adjacent the rearward face thereof, a magazine clip plate having upper and lower edges engageable in said track grooves for lateral sliding, a plurality of vertically disposed parallel cartridge base receiving channels in said plate having flanges engaging the base flanges of the cartridges whereby the cartridges are wholly carried by said clip plate, the loaded clip being insertable into said receptacle, means for holding said clip in said receptacle, means carried by the latter engaging the forward (bullet) ends of a row of cartridges to hold them in alinement with the respective base channel, means for vertically feeding the cartridges of an end row, and means for cross feeding the clip plate after exhaustion of the end row.

15. In a firearm magazine system, a substantially rectangular magazine receptacle having lateral track grooves in its upper and lower faces adjacent the rearward face thereof, a magazine clip plate having upper and lower edges engageable in said track grooves for lateral sliding, a plurality of vertically disposed parallel cartridge base receiving channels in said plate having

flanges engaging the base flanges of the cartridges whereby the cartridges are wholly carried by said clip plate, the loaded clip being insertable into said receptacle, means for holding said clip in said receptacle, means carried by the latter engaging the forward (bullet) ends of a row of cartridges to hold them in alinement with the respective base channel, means for vertically feeding the cartridges of an end row, and means for cross feeding the clip plate after exhaustion of the end row, said receptacle having a through vertical slot through which the clip may pass after unloading of cartridges therefrom.

16. In combination, a plurality of cartridges, a magazine clip having a plurality of cartridge base receiving parallel channels therein, flanges on the channel borders engaging over the flanges of the cartridges, said cartridges having a channel engaging base portion smaller in diameter than the cartridge body, whereby when assembled, the cartridges of adjacent rows contact one another and the cartridges in each row contact one another.

17. In a firearm, a box magazine beneath and extending laterally beyond each side of the firearm receiver, one side of said magazine being open and the other side having cartridge feeding mechanism, the receiver having a feed chute extending laterally thereto from the cartridge feeding side of said magazine, and a cartridge clip adapted to be inserted into said magazine from the open side thereof, said clip when loaded lying substantially equally on each side of the firearm plane of symmetry, whereby a minimum of tilting is induced in the firearm due to the weight of the loaded clip.

18. A magazine clip for firearms comprising in combination, a support member, parallel rails extending therefrom, opposed flanges along each rail edge, and a row of cartridges between said rails, each cartridge case having a groove in its base end engaged by said rail flanges, and having a base flange of less diameter than the case body engaged between said rails, the cases when assembled in the clip being in contact with one another in virtue of said reduced diameter base flange.

19. In a magazine mechanism for a firearm, a magazine housing in the firearm receiver having an open side for reception of a cartridge clip, a clip having a plurality of vertical cartridge receiving channels, means actuated by firearm operation for feeding the cartridges from each channel to the arm, spring means urging said clip toward the feeding means, and means actuated by the firearm upon emptying of any channel and responsive to movement of the clip toward said feeding means for resetting said spring means to again urge said clip toward the feeding means.

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