The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to the owner thereof any royalty thereon.

This invention relates to an apparatus for loading the clip of a firearm with cartridges. It is an object of this invention to provide an apparatus whereby a clip for firearm may be completely loaded in one convenient operation. It is another object of this invention to provide a clip loading machine which is particularly adapted for the loading of clips of the type carrying two rows of cartridges.

It is a further object of this invention to provide a clip loading machine which will readily strip the desired number of cartridges from a standard manufacturer's container, load such cartridges in a staggered double row relationship in the clip, and eject the loaded clip.

It is a further object of this invention to provide a clip loading machine which will strip cartridges for loading purposes either from a standard manufacturer's carton or from a loaded single line cartridge clip such as the type used in the U.S. rifle, caliber .30 M1903, commonly known as the Springfield rifle.

It is a particular object of this invention to provide a clip loading machine which will conveniently and rapidly load a clip of the type used in the U.S. rifle, caliber .30 M1.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from a description of a preferred embodiment as shown in the accompanying drawings in which:

Fig. 1 is a perspective view of the clip loading machine in the open position and supporting a row of cartridges (shown in phantom).
Fig. 2 is a view in front elevation of the device in the closed position where it is conditioned to force a series of cartridges into a cartridge clip.
Fig. 3 is a view in side elevation with parts in section showing a group of cartridges inserted in a Garand clip.
Fig. 4 is a front elevational view with a part removed of the loading device in the open position and arranged to receive an empty cartridge clip.
Fig. 5 is an enlarged view in side elevation and partly in section representing an empty cartridge clip being inserted in the magazine of the device.
Fig. 6 is a top plan view of the magazine and associated follower and an empty cartridge clip positioned therein.
Fig. 7 is a side elevational view of the follower with a portion thereof in section for clearer illustration.
Figs. 8 and 9 are respectively plan and end elevational views of the follower.
Fig. 10 is a perspective view of a loaded clip for a U.S. rifle, caliber .30 M1.
Fig. 11 is a perspective view of an unloaded clip.
Fig. 12 is a front elevational view of a loaded Garand clip illustrating the disposition of the cartridges.
Fig. 13 is a perspective view of a plurality of cartridges packed in a manufacturer's carton.
Fig. 14 is a side elevational view showing the manner in which a row of cartridges is fed from a manufacturer's carton into the feeding member of the device.
Fig. 15 is a plan view thereof with the top of the carton removed.
Fig. 16 is a sectional view on the line 16-16 of Fig. 3.
Figs. 17 and 18 are perspective views of adapter details.
Fig. 19 is a view in perspective of a loaded Springfield clip.
Fig. 20 is a vertical longitudinal sectional view of the adapter unit receiving a loaded Springfield clip from which the cartridges are to be depressed into the feeding unit.
Fig. 21 is a vertical longitudinal sectional view of the adapter and the top portion of the feeding unit showing the manner in which the adapter is unlatched and the clip forced into its seat as the adapter is depressed, and
Fig. 22 is a similar view showing the cartridge clip being ejected from its seat in the top of the feeding member on the up stroke of the adapter.
Fig. 23 is a top elevational view of the cartridge guide showing its relation to the top cartridge of a loaded clip.

A clip loading machine embodying this invention comprises a base member 1 to which are securely fastened two upstanding members 2 and 3. The fastening may be by the bolts 4 or any other convenient method. The upstanding member 3 is substantially longer than the member 2 so that the general outline of the structure is that of a U having one short arm.

In the bases of members 2 and 3, there are respectively provided opposing horizontal recesses 5 and 6; see Figs. 3 and 5. These recesses serve as trunnion supports for a member 7 which may be
called a magazine due to its resemblance to the magazine of a firearm. The magazine T is provided at its base with extending pins 3 and 9 which are engaged in the recesses 5 and 6 respectively, thereby pivotally supporting the magazine member 7. A spring 10 is inserted in the recess 5 behind the pin 8 and tends to prevent transverse movement of the member 7 in the direction of the axes of the recesses 5 and 6. The magazine 7 is generally of a box shape having its top and left side open; see Figs. 1 and 2. Near the front corner of that side of the magazine member 7 adjacent to the upstanding member 3, there is suitably fastened a vertically extending slide member 11. An operating member 14 is adapted to reciprocate on this slide member. The operating member is provided with handle 12 suitably secured thereto. The member 14 is also provided with an extending finger 15 which cooperates with the upstanding member 3, in a manner to be described. The vertical movement of the operating member 14 and its associated members is limited at the bottom of slide member 11 by the engagement of the fingers 16 with the top surface of magazine 7 and at the top by engagement with a pin 17 provided in the slide member 11.

Within the magazine 7, a follower member 18 is provided which is guided in its vertical reciprocation within the magazine T by engagement of two oppositely disposed extending ears 19 with vertical grooves 20 in oppositely disposed sides of magazine 7 as shown in Figs. 1 and 6. The follower is biased upwardly by a spring 2. One end of the spring 2 abuts against the under surface of the follower 18 while the other end is secured to the bottom of magazine 7 by surrounding a stud 22 (Fig. 5) which is suitably secured to the bottom of magazine 7 as fastener 23. A downwardly extending portion 16a of the follower 18 is provided to surround several of the top turn of the spring 2 and thus support it against transverse movement. The upward motion of the follower 18 is restricted by a transversely disposed bar 24 secured to one end of the follower and arranged to engage extending lips 25 formed on two sides of magazine 7. The bar 24 may also serve to guide the vertical movement of the follower 18 through its sliding engagement with the exposed end surfaces 26 of the magazine 7. The top surface of the follower has a horizontal slot 27 and a longitudinal recess 28 which will support a cartridge of the type to be loaded; see Figs. 1, 6, 8, and 9. The follower 18 is roughly of T shape and sufficient clearance is provided between that part of the follower corresponding to the stem of the T and the side walls of the magazine 7 to permit ready insertion of an empty clip 13 in the magazine (Fig. 11). The clip is inserted with its open ends facing the upstanding member 2; see Figs. 3 and 6. Its movement in the magazine is guided by oppositely disposed vertical grooves 1d in the wall of the magazine which engage the ridges 1c existing at the juncture of sidewalls and base of the clip. The bottom of the clip 13 when inserted in the magazine rests on a stop 1e and secured to the magazine side wall as by a rivet 1f (Fig. 5).

The top portion of upstanding member 3 supports a vertical feeding member 27. The member 27 is suitably secured to the upstanding member 3 as by the rivets 15 (Fig. 2). The feeding member 27 is provided on its inferior surface with a recess 29 extending throughout its length. Each of the opposing sides 30 of this recess 29 is provided with a longitudinal groove 31 as shown in Fig. 16. The grooves 31 are of such dimension and location with respect to each other that they will loosely engage the rims of the cartridges to be loaded. The lower portion of the recess 29 is provided with side walls 32 of increased dimension; see Fig. 1. These side walls serve to guide the cylindrical walls of the cartridges as they are moved down the groove 31.

When the magazine 7 and associated members are pivoted on the pin 8 into the vertical position as shown in Fig. 2, the bottom of the recess 29 directly overlies the clip insertion end of the follower 18. When the magazine member 7 is pivoted in a clockwise direction as by operation of the handle 12 to the position shown in Figs. 1 and 4, then an extending portion 33 of the top of the magazine 7 is moved directly under the bottom of recess 29 preventing any cartridges which may be in the recess from dropping out. A lug 34 on this extending member limits the clock wise pivotal movement of the magazine 7 by engagement with the side wall 32. It should be mentioned here that counterclockwise pivotal movement of the magazine 7 past its position of vertical alignment with the recess 29 is prevented by engagement of a surface of operating member 14 with the side of feeding member 27.

The height of that portion of the recess 29 defined by the side walls 32 is slightly greater than the height of a clip load of cartridges held in vertical alignment in the slots 31. The location of the stop pin 17 at the top of slide member 11 is such that when operating member 14 is raised to its maximum height and the magazine assemblage pivoted into its vertical position, the extending finger 16 will just clear the top ends of side walls 32 (Figs. 2 and 3). A rectangular extension 16b of the finger 16 may thereby ride between the side walls 32 when the operating member 14 is moved down the slide 11. Such engagement locks the magazine assemblage in vertical position until the extension 16a passes below the bottom of side walls 32 at which point the magazine assemblage is freed for clockwise pivotal movement.

A U shaped guide member 35 is mounted on, or formed integral with, the top of upstanding member 2. The open portion of the U shaped member is directly opposite and in alignment with the recess 29. A rib 35a (Figs. 1, 3 and 23) is provided on the interior of the U-shaped guide 35. The restricted opening defined by rib 35a is directly aligned with the path of the nose of cartridges 22 and wide enough to permit the cartridges to freely pass through. However, the nose of the top cartridge of a fully loaded clip will lie under the rib 35a due to the lateral displacement of such cartridge when loaded into the clip. The member 35 thus serves to engage the cartridges travelling in recess 29 by sliding engagement with the nose of such cartridges.

In operation, the magazine assemblage is pivoted in a clockwise direction to its open position shown in Fig. 1. Any number of cartridges, equal to or greater than the number required for a full clip, are then inserted in the top of the recess 29 by engagement of the cartridge rims in the slots 31. The cartridges are pushed or pulled to the bottom of the recess 29 where they are supported by the extension 33 of the top of the magazine and aligned by side walls 32 and U shaped member 35. The operating member 14 is raised to its maximum position on the slide member 11. A clip 13 is now inserted in the magazine in the
manner shown in Figs. 5 and 6. The operator then rotates the magazine assemblage counterclockwise to its vertical position (Fig. 2) by means of the handle 12. The finger 16 wedges its way between the cartridges and as previously pointed out, the number of cartridges thus secured below the finger 16 is the proper number to completely load the clip.

The operator then depresses the operating mechanism 14 down the slide member 11 to the position shown in Fig. 3. The cartridges are thus forced one by one into the aligned opening of the magazine. The first cartridge entering the clip drops into the semi-cylindrical depression 150 in the follower thus insuring that the cartridges will be loaded into the clip in consecutively staggered relation (Figs. 10 and 12). As each succeeding cartridge is forced down into the magazine, and hence into the clip, the follower 18 is further depressed, compressing the follower spring 21. Furthermore, the piling up of the cartridges in staggered relation stresses the walls of the clip outwardly. The last cartridge to be forced into the clip is held therein by the overhanging lip 13a on the clip 13 and at this point the first cartridge has been brought into engagement with the overhanging lip 13b at the bottom of the clip. Thus the cartridges are firmly secured within the clip and the entire loaded clip is now subject to the upward force exerted by the follower spring 21. As the last cartridge is forced into the clip it is moved sidewise and the nose of the cartridge moves under rib 35a of guide member 35 (Fig. 23). Thus the clip is held in position against the bias of follower spring 21. In this position there is sufficient clearance for the extending lug 15a on finger 16 to pass beneath the bottom of side wall 32. The operator may then rotate the magazine assemblage counterclockwise to its open position and the restraint on the loaded clip exercised by the rib 15a is removed and, as handle 12 is raised, the loaded clip is ejected from the magazine by the force of the compressed follower spring 21.

As previously pointed out, the longitudinal recess 29 and its cooperating slots 31 are exposed at the top of feeding member 27. The usual method of packing cartridges by the manufacturer produces an array conveniently illustrated by Figure 13. As shown in this figure, the cartridges are arranged in two rows of superimposed cartridges and have the rim ends exposed. It is, therefore, convenient to feed cartridges from such cartons into the clip loading machine as an entire row of cartridge rims may be inserted in the notches 31 as delineated in Figs. 14 and 15 and all of the cartridges in that row withdrawn from the carton in one operation.

It has often been found desirable to transfer cartridges from loaded single row clip (Fig. 19), such as utilized in the U.S. rifle, caliber .30 M1903, into a double row clip (Figs. 10 and 12) such as utilized in the U.S. rifle, caliber .30 M1. To readily accomplish the unloading of such single row clips and the loading of a double row clip, there is provided an adapter attachment to the clip loading machine which is illustrated at the top of Fig. 1.

The adapter comprises a longitudinal member 37 which is arranged to reciprocate vertically on the top portions of the feeding member 27. The feeding member 27 is provided with grooves 38 on its two exterior faces adjacent to the recess 29; see Fig. 16. The adapter member 31 is generally U shaped in cross-section, having a base 37a and a pair of side walls 37b, and fits around three sides of the feeding member 27. It is provided with longitudinal ridges 39 on its opposed interior surfaces which accomplish the grooves 38 in feeding member 27. This engagement serves to guide the movement of adapter 37 and to hold it in engagement with feeding member 27.

At the top of adapter 37, a cylindrical extension 49 is provided which serves as a convenient operating handle. An L shaped member 41 is pivotally supported at the top of adapter 37 by a pin 42 running through the two sides of the adapter member. The short side of the L shaped member 41 fits into a recess 43 in the operating handle 48. The adapter member 41 extends down inside the adapter 37. This downwardly extending member has a U shaped channel 44a (Figs. 1 and 18) for about two-thirds of its length and its remaining portion constitutes a finger 44b formed by extension of the base of the U shaped portion. The supporting pin 42 is so arranged as to allow the downwardly extending member 44 to be slightly displaced from the base 37a. This supporting arrangement permits slight pivotal movement of the L member 41. In the normal position of the L shaped member 41, the extending finger 44b rests upon the base 37a of the adapter 37. However, when the operating handle 48 is grasped by the operator's hand and depressed the grasping rotates the L shaped member 41 and hence raises finger 44b a substantial distance above the base 37a.

The vertical movement of the adapter member is limited in both directions by transverse pins 45 extending through the adapter member; see Figs. 2, 3, and 19. This pin engages shoulders 45 and 47 on the rear surface of feeding member 27 to respectively limit the downward and upward sliding motion of the adapter on the feeding member.

When the adapter is in its lowermost position, that is the pin 45 resting against the shoulder 46, the extending finger 44b is abutting against the top of the recess 29 in the feeding member 27. In this position loading of cartridges individually or from manufacturer's cartons may still be conveniently accomplished by sliding the head of the cartridges down the recess formed by the U shaped member 44 and hence into recess 29 and the slots 31 of the feeding member 27.

To accomplish the unloading of cartridges from a Springfield clip into the feeding member 27, the adapter 37 is raised to its highest position, that is, where pin 45 engages shoulder 47; see Figs. 20, 21, and 22. This movement exposes the U shaped interior of that portion of the adapter 37 lying below the extremity of the L shaped member 41. The dimensions of this portion are such as to readily accommodate the base of a loaded Springfield clip. In the base 37a of this portion of the adapter member 37, a recess 48 of substantial depth is provided, the walls 48a defining this recess extending beyond the back surface of the adapter member 37; see Figs. 1, 20, and 21. The pin 45 overlies the lower part of the recess 48. A clip engaging member 49 is adapted to pivot in the recess 48 about the pin 45 (Figs. 20, 21, and 22). The clip engaging member 49 is provided on its non-pivoted end with a slight projection 50 which acts as a latch engaging the top of feeding member 27 and prevents the adapter member 37 from sliding downward on the feeding member 27 after the adapt-
er member 37 has been raised sufficiently high to engage the latch 50 as shown in Figs. 3 and 20. The clip 49 is also provided near its center with a forwardly projecting nose 51 perpendicularly disposed with respect to the main portion of the ejector 49. A slot 52 is cut through the base of the recess 29 adjacent to the top of feeding member 27. In the top latched position of the adapter 31 with respect to the feeding member 27, the nose 51 projects through the slot 52. The rotation of the ejector 49 to accomplish the latching action by the latch 50, and as well as projection of the nose 51 through the slot 52, is accomplished by a cam surface 53 on the back of feeding member 27 which cooperates with surface 54 of the ejector member 49; see Figs. 20 and 22. Such camming action, however, does not hold the member 49 rigidly in this forward position. The cam surface does initiate the pivotal movement of the ejector 49 but its final movement into latching position is accomplished by the force of gravity acting on the ejector. It is thus possible to readily disengage the latch 50 merely by pushing it backwards a very slight distance.

Such disengagement is accomplished when a loaded Springfield clip is inserted in the adapter member 37. When the adapter 31 is in its raised latched position, there is sufficient spaced between the top of feeding member 27 and the bottom of finger 44b to permit the insertion of a loaded Springfield clip in the channel of the adapter 31. Furthermore the bottom portion of the Springfield clip may be dropped into a recess 55 in the top end of the feeding member 27. This recess 55 constitutes merely an enlargement of the grooves 31 in the side walls 30 of feeding member 27. Upon insertion of the Springfield clip into the recess 55, the bottom of the clip strikes the projecting nose 51 of the ejector 49, as shown in Fig. 20.

The pressure thus exerted on the nose 51 of the ejector 49 by the clip rocks the ejector slightly clockwise as viewed in Fig. 20 and removes the latch 50 from engagement with the upper end 50 of the feeding member 27. This press the adapter for downward movement produced by the operator by pressure on the operating handle 42. The grasping of the handle 40 swings the member 41 into the position shown in Fig. 21 whereas the finger 44b engages the uppermost cartridge in the clip. As the adapter is thrust downwardly, the clip is lodged on the base 55a of the recess 55 and is confined against any further downward movement. As previously stated recess 55 is aligned with recess 29 in feeding member 27 and the lowest row cartridge is now held with its rim in direct alignment with the slots 31 in feeding member 27.

Concurrently, the initial downward movement of the adapter 31 brings the inclined bottom surface 51a of the nose 51 of the ejector in engagement with the inclined bottom surface 52a of the slot 52 and the camming action of these two surfaces rocks the ejector 49 in a clockwise direction as shown in Fig. 21. The nose 51 of the ejector 49 is thereby withdrawn from the slot 52.

By continued application of downward force, the cartridges are stripped from the Springfield clip and enter the grooves 31 and the recess 29 of the feeding member in consecutive order.

When the last cartridge has been thus inserted into the feeding member 27, the adapter 31 is raised by the operator. The cam surface 53 on the back of feeding member 27 engages the cooperting surface 54 of the ejecting member 49 and pivots this member forwardly. The nose 51 is thus thrust under the empty Springfield clip raising it out of the recess 55 and thus permitting it to fall out of the adapter 31. This operation of the adapter 31 permits the latch 53 to engage the top surface 56 of the feeding member 27 holding the adapter in its vertical position ready for a new loaded Springfield clip to be inserted.

It should be understood that after the cartridges are inserted in the grooves 31 in the feeding member 27, the loading of the cartridges into the double row clip proceeds as already outlined.

While the operation of the adapter has been described in connection with the stripping of a loaded Springfield clip, it is obvious that the same apparatus may be utilized without substantial modification for the stripping of any flat single row cartridge clip of which the Springfield clip is merely the best known variety.

I claim:

1. A clip loading device comprising a base, a vertical member mounted thereon and arranged to support a vertical row of cartridges, a magazine member adapted to receive a clip, said magazine member being pivotally mounted on said base beneath the vertical member whereby the clip opening may be aligned beneath the vertical row of cartridges; and means mounted on said magazine member arranged to divide a desired number of bottom cartridges from the vertical row and to force such divided cartridges downwardly into said clip successively.

2. A clip loading device comprising a base, a vertical member mounted thereon and arranged to support a vertical row of cartridges, a magazine member adapted to support a U-shaped clip so that the arms and base of said clip are disposed in vertical planes, said magazine member being pivotally mounted on said base beneath the vertical member whereby the clip opening may be aligned beneath the vertical row of cartridges, and means mounted on said magazine member arranged to divide a desired number of bottom cartridges from the vertical row and to force such divided cartridges downwardly and into said clip successively.

3. A clip loading device comprising a base, a vertical member mounted on said base and arranged to laterally support a vertical row of cartridges, a magazine member disposed beneath said row of cartridges and mounted on said base for limited pivotal movement about a horizontal axis, said magazine member arranged to receive a clip, the clip opening being aligned beneath the vertical row of cartridges, and means mounted on said magazine member arranged to divide a desired number of bottom cartridges from the vertical row and to force such divided cartridges downwardly and into said clip successively.

4. A cartridge clip loading device comprising a base, a vertical guide member mounted on said base and arranged to laterally support a vertical row of cartridges, a magazine member dis-
posed beneath said row of cartridges and mounted on said base for limited pivotal movement about a horizontal axis, said magazine member being arranged to receive a U-shaped clip, the clip opening being aligned beneath the row of cartridges in the vertical position of the magazine member, a projection on said magazine member arranged to provide vertical support for said cartridge row when the magazine member is pivoted to an inclined position, a vertically extending rod secured to said magazine member, an operating handle arranged to slide on said rod, and an extending finger on said handle, which finger, in the vertical position of said magazine member, is arranged to divide a desired number of bottom cartridges from the vertical row, whereby said divided cartridges may be consecutively forced into the clip by downward movement of the handle.

5. A cartridge clip loading device comprising a magazine member, said magazine member comprising means for supporting a U-shaped clip, a follower mounted in the magazine member for movement through the clip, resilient means biasing said follower upwardly, and means for forcing a clip load of cartridges consecutively into said clip, depressing said follower completely out of said clip, whereby said resilient means tend to eject the loaded clip.

6. A clip loading device comprising a base, a vertical member mounted thereon and arranged to support a vertical row of cartridges, a magazine member adapted to receive a clip, said magazine member being pivotally mounted on said base beneath the vertical member whereby the clip opening may be aligned beneath the vertical row of cartridges, means for dividing a desired number of bottom cartridges from the vertical row and forcing them downward into said clip consecutively, and resilient means in said magazine member for ejecting the loaded clip.

7. A clip loading device comprising a base, a vertical guide member mounted on said base and arranged to laterally support a vertical row of cartridges, a magazine member disposed beneath said row of cartridges and mounted on said base for limited pivotal movement about a horizontal axis, said magazine member being adapted to receive a U-shaped clip, the clip opening being aligned beneath the row of cartridges in the vertical position of the magazine member, a projection on said magazine member arranged to provide vertical support for said cartridge row when the magazine member is pivoted to an inclined position, means arranged to divide a desired number of bottom cartridges from the vertical row and to force such divided cartridges downwardly into said clip consecutively, and resilient means in said magazine member for ejecting the loaded clip.

8. A clip loading device comprising a base, a vertical member mounted on said base arranged to provide lateral support for a vertical row of cartridges, a magazine member pivotally mounted on said base beneath said vertical member, the said pivotal mounting of said magazine member permitting vertical alignment of the magazine member beneath the row of cartridges, said magazine being adapted to support a U-shaped cartridge clip, a follower mounted in the magazine member for vertical movement through the space defined by said clip, resilient means biasing said follower upwardly, an extension on said magazine member providing vertical support for the row of cartridges when the magazine member is pivoted out of the aligned position, an operating member secured to said magazine member which, in the vertical position of the magazine member, divides a clip load of bottom cartridges from the vertical row whereby such divided cartridges may be forced consecutively into the clip by downward movement of the operating member, thereby depressing the follower out of the clip, and means for holding said loaded clip within the alignment member against the force of said follower resilient means until said magazine member is pivoted out of said aligned position.

9. A clip loading device comprising a base, a vertical member mounted on said base arranged to provide lateral support for a vertical row of cartridges, a magazine member pivotally mounted on said base beneath said vertical member, the said pivotal mounting of said magazine member permitting vertical alignment of the magazine member beneath the row of cartridges, said magazine being adapted to support a U-shaped cartridge clip, a follower mounted in the magazine member for vertical movement through the space defined by said clip, resilient means biasing said follower upwardly, an extension on said magazine member providing vertical support for the row of cartridges when the magazine member is pivoted out of the aligned position, an operating member secured to said magazine member which, in the vertical position of the magazine member, divides a clip load of bottom cartridges from the vertical row whereby such divided cartridges may be forced consecutively into the clip by downward movement of the operating member, thereby depressing the follower out of the clip, and means for holding said loaded clip within the alignment member against the force of said follower resilient means until said magazine member is pivoted out of said aligned position.

10. In a machine for loading articles into an article holder, means to align said articles in a vertical stack, means supporting an article container in position to receive said articles, movable supporting means for said stack of articles positioned to move through said article container, resilient means opposing movement of said supporting means through said article container, means for isolating a group of the bottom articles from said stack of articles and to force said articles into said article container compressing said resilient means, said resilient means being effective to eject said article container when it is filled with said articles.

11. A cartridge clip loading device comprising a magazine member, said magazine member arranged to support a clip, means for forcing a clip load of cartridges consecutively into said clip and resilient means in said magazine member arranged to eject the loaded clip.

12. A cartridge clip loading device comprising a base, a vertical member mounted on said base and arranged to support a vertical row of cartridges, a magazine member mounted on said base beneath the row of cartridges, said magazine member comprising means for supporting a U-shaped clip, a follower mounted in said magazine member for movement through the clip, resilient means biasing said follower upwardly, and means arranged to divide a desired number of bottom cartridges from said vertical row of cartridges and to force said divided cartridges con-
secutively into the clip, depressing said follower completely out of said clip, whereby said resil-
ient means tends to eject the loaded clip from the magazine member.
13. A clip loading device comprising a base, a vertical member mounted thereon and arranged to support a vertical row of cartridges, a magazine member adapted to receive a clip, said magazine member being pivotally mounted on said base beneath the vertical member whereby the clip opening may be aligned beneath the vertical row of cartridges, means for dividing a desired number of cartridges from the vertical row and forcing them downward into said clip consecu-
vitively, resilient means in said magazine member for ejecting the loaded clip, and means prevent-
ing ejection of said loaded clip until said maga-
azine member is pivoted out of said aligned posi-
tion.

JOHN C. GARAND.