April 14, 1931. J. M. BROWNING 1,800,595

MAGAZINE FEED MECHANISM FOR MACHINE GUNS

Filed Jan. 25, 1926 2 Sheets-Sheet 1

Fig. 1

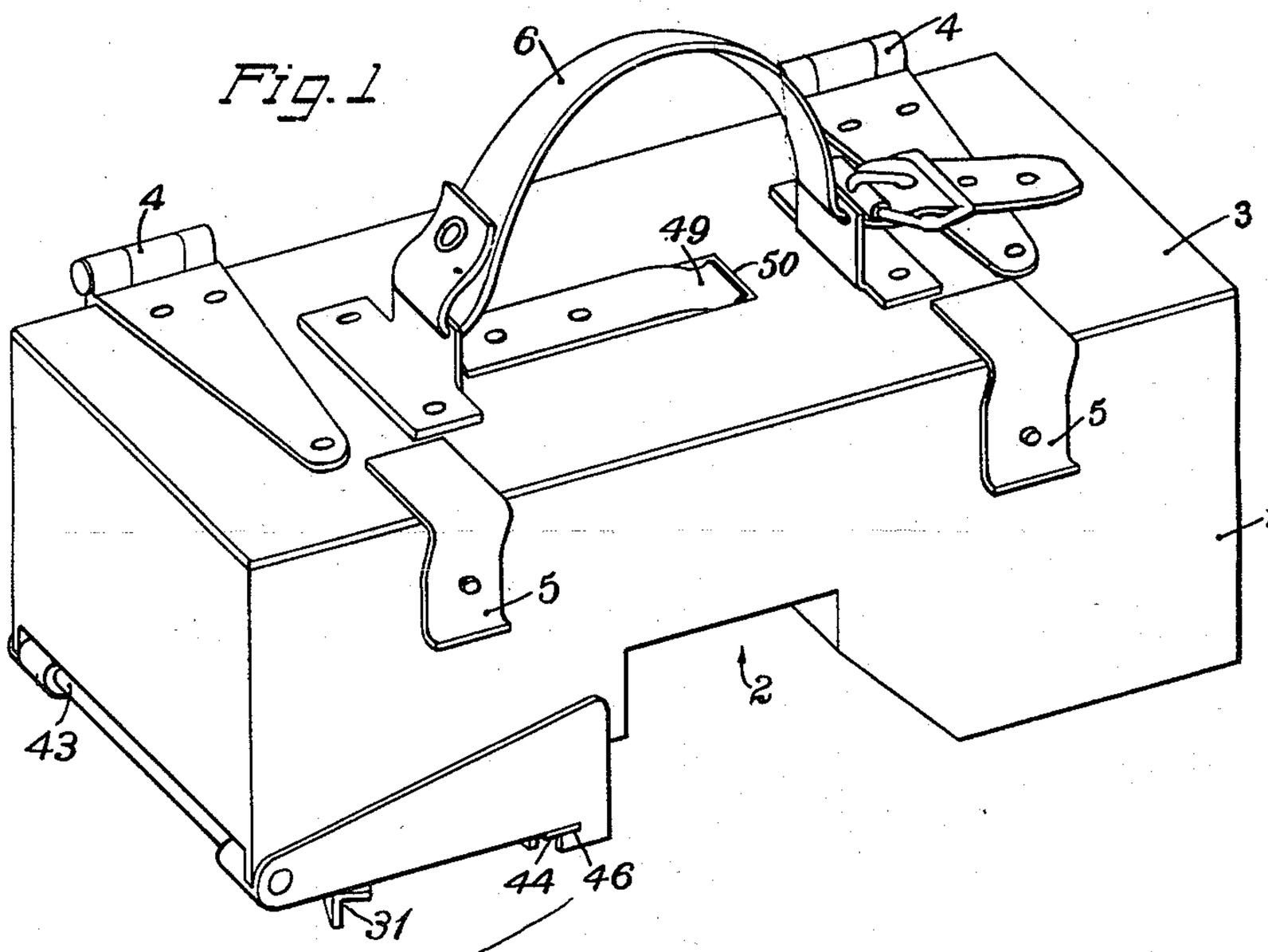


Fig. 2

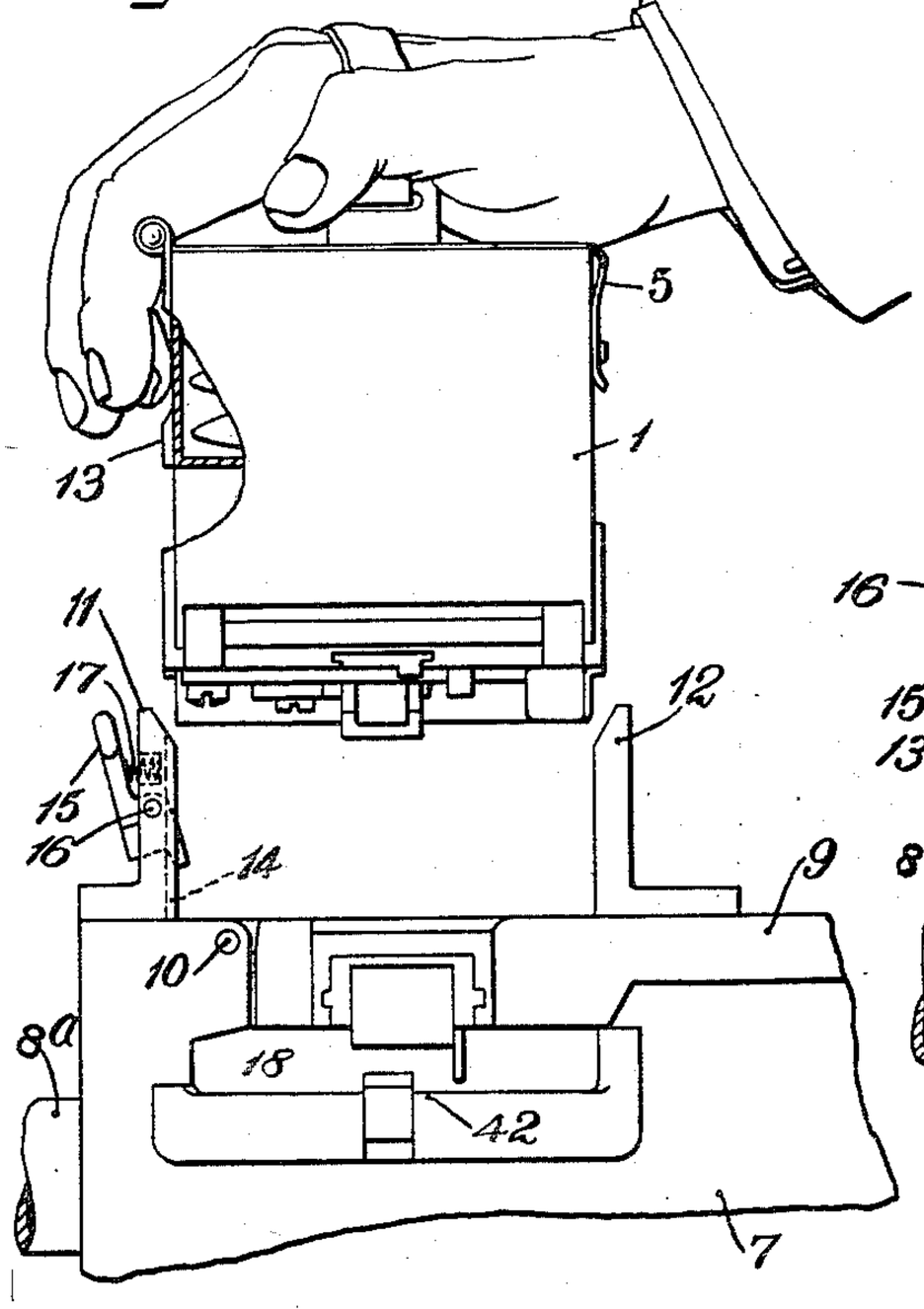
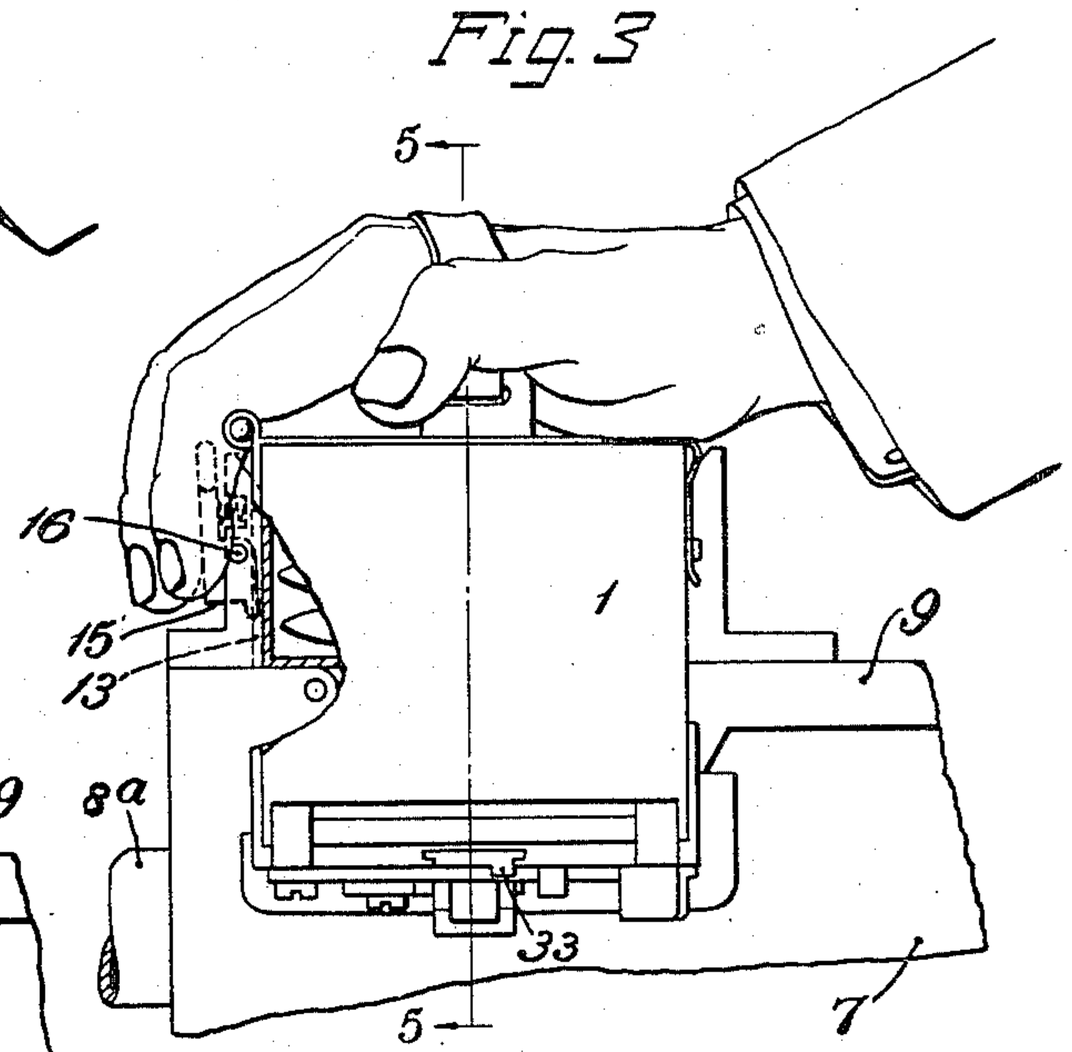


Fig. 3



Inventor

John M. Browning

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MAGAZINE FEED MECHANISM FOR MACHINE GUNS

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Fig. 4

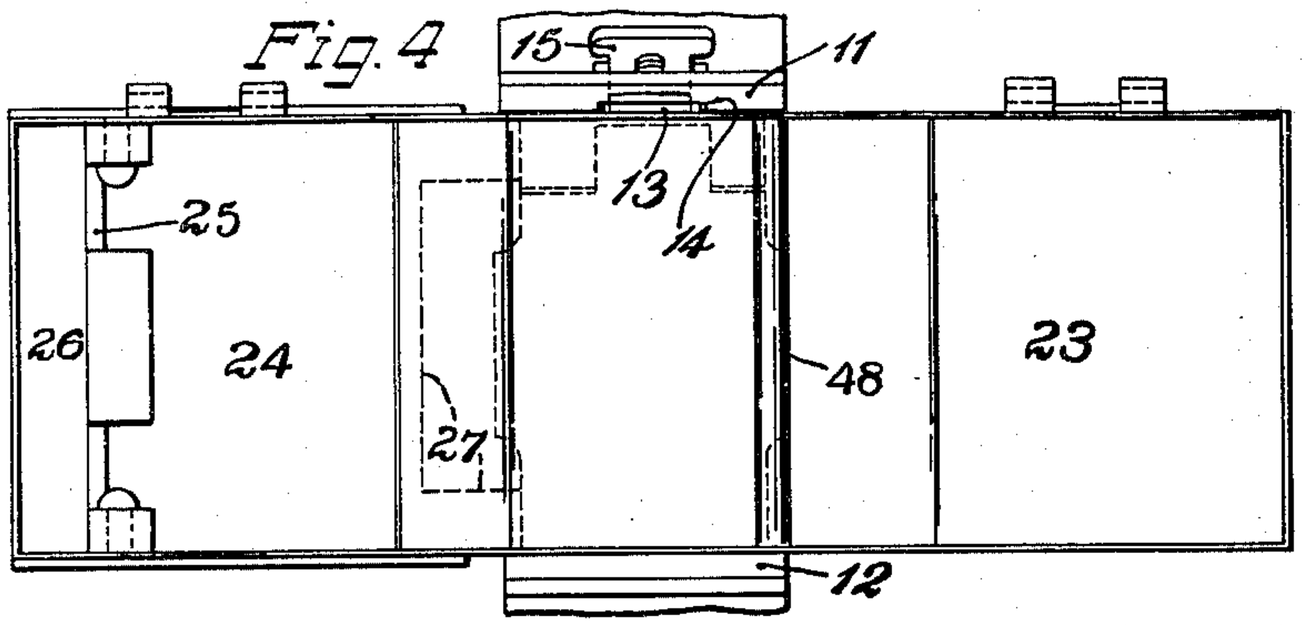


Fig. 6

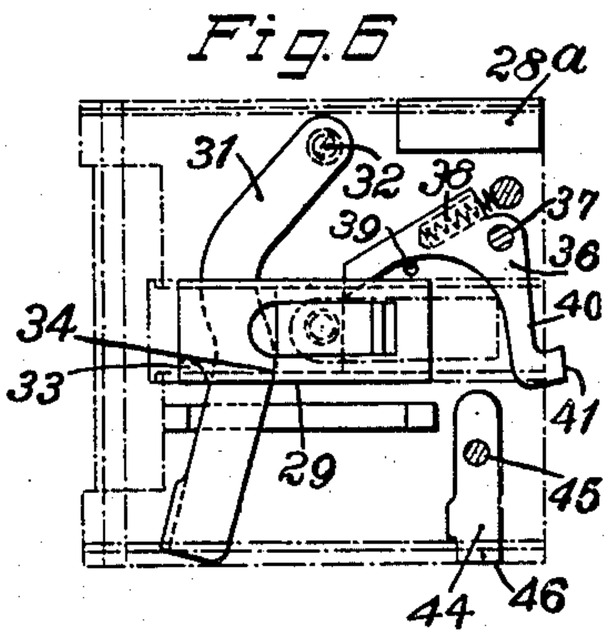


Fig. 5

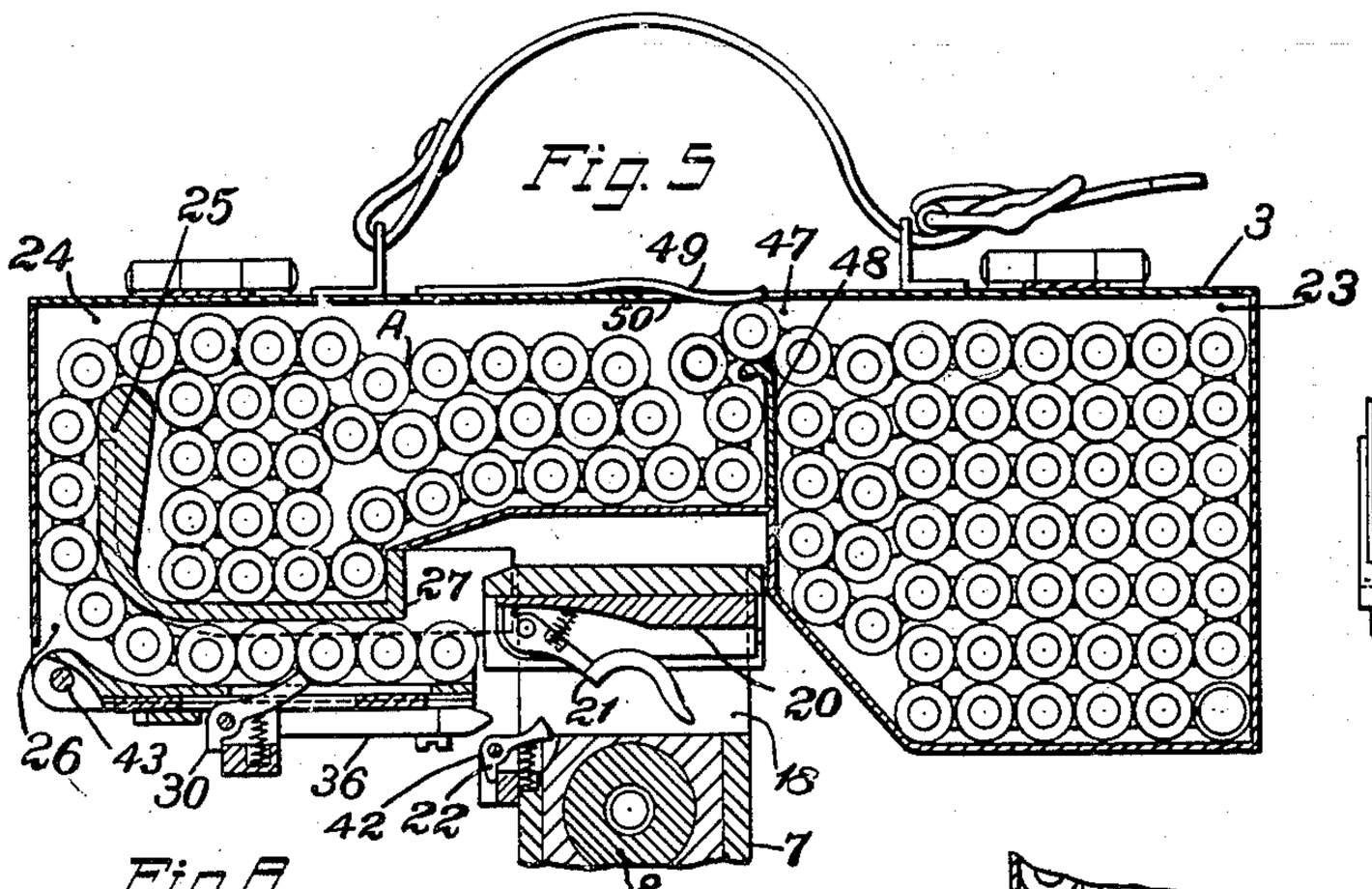


Fig. 7

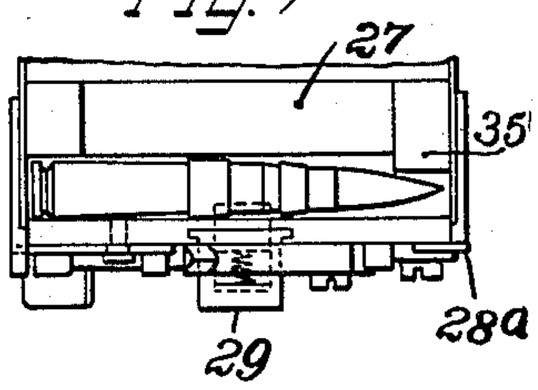


Fig. 8

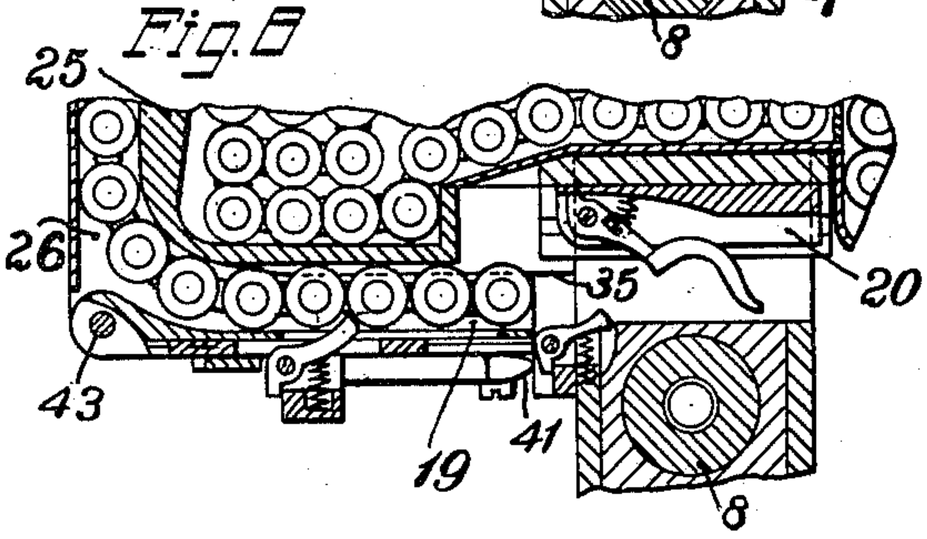


Fig. 10

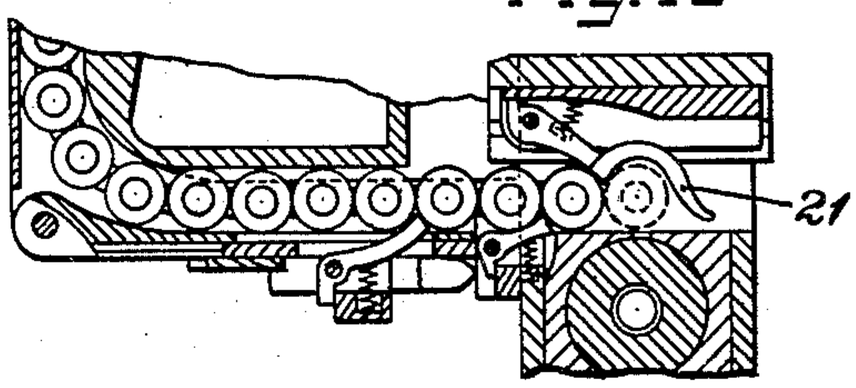


Fig. 9

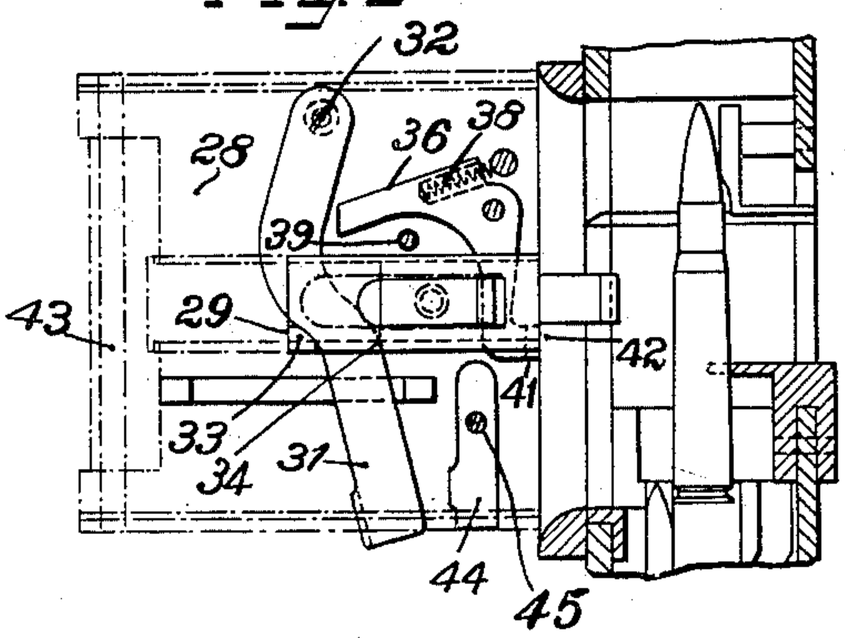
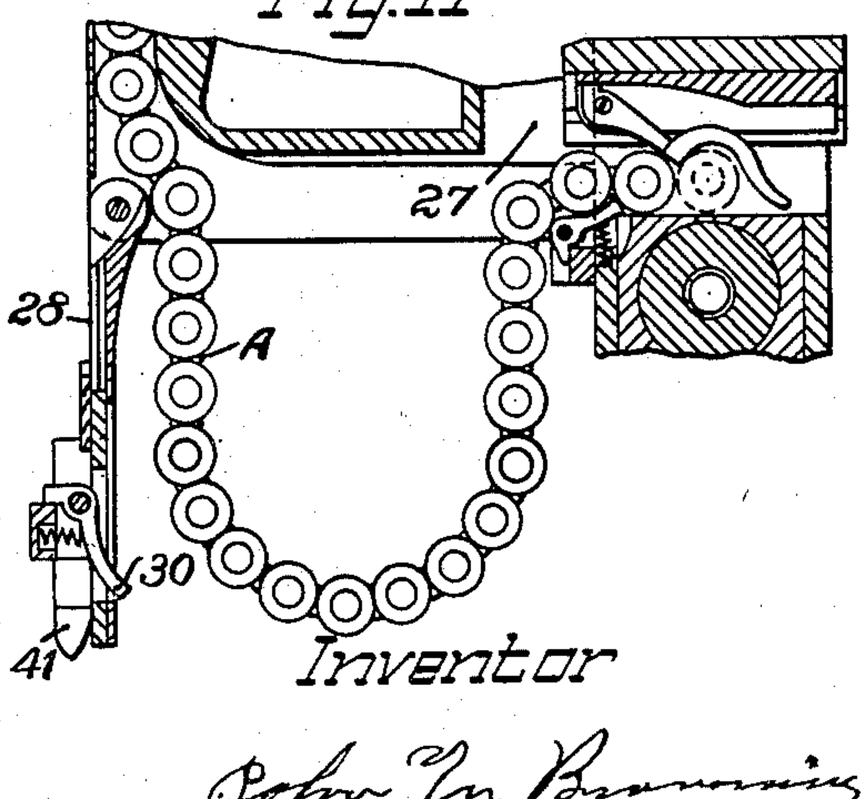


Fig. 11



Inventor

John M. Browning

Patented Apr. 14, 1931 1,800,595

UNITED STATES PATENT OFFICE

JOHN M. BROWNING, OF OGDEN, UTAH; JOHN BROWNING, ADMINISTRATOR OF SAID JOHN M. BROWNING, DECEASED, ASSIGNOR TO J. M. & M. S. BROWNING COMPANY, OF OGDEN, UTAH, A CORPORATION OF UTAH

MAGAZINE-FEED MECHANISM FOR MACHINE GUNS

Application filed January 25, 1926. Serial No. 83,584.

A mechanism embodying the invention includes a feed box or magazine adapted to be readily attached to or removed from an automatic machine gun, especially an automatic machine gun of the Browning type, and the invention relates more particularly to a construction of the type wherein a cartridge feed belt is withdrawn from the magazine by means of the mechanism of the gun.

The invention is of peculiar advantage when applied to guns which are ordinarily or frequently carried or operated in various positions, not only at various angles of elevation but at various angles of transverse inclination. A gun mounted upon an airplane constitutes an example of the class referred to, and such a gun may be at times completely inverted.

One object of the invention is to provide a relatively light magazine of the type referred to having a large capacity and capable of being attached to the gun or removed therefrom quickly and easily by the use of one hand only, and so constructed that there is a minimum possibility of any misfitting or jamming which might cause delay.

Another object of the invention is to provide improved means for advancing the initial or forward end of the cartridge feed belt from the magazine into the gun where it can be engaged by the gun mechanism, and also to provide a safety locking device for the said mechanism.

In accordance with the invention a guide channel is provided which communicates with the magazine and which extends laterally approximately to the entrance end of the feed channel. One of the objects of the invention is to provide means whereby the portion of the belt in the said feed channel may be released to permit access to be had to the feed mechanism of the gun in case of any stoppage or jamming inside of the gun.

A still further object of the invention is to provide a feed box of the type described having means therein for preventing parts of the feed belt from accidentally shifting by gravity or otherwise from one side of the magazine to the other.

Additional objects of the invention will be apparent from the following specification and claims.

In the accompanying drawings I have shown the embodiment of the invention which is now deemed preferable and in the following description this embodiment will be described in detail; but it is to be understood that the drawings and the detailed description are merely for the purpose of fully illustrating and disclosing the invention and are not to be construed as defining or limiting the scope thereof, the claims forming a part of this specification being relied upon for that purpose.

In the embodiment of the invention herein disclosed certain novel elements are mounted on the gun and certain other novel elements are mounted upon the feed box or magazines so as to be removable therewith from the gun. It will be understood, however, that I do not necessarily limit myself to the specific location or mounting of the several parts except in so far as the location or mounting thereof is specifically included in the claims.

Of the drawings,

Fig. 1 is a perspective view of a magazine embodying the invention.

Fig. 2 is a left side view showing the magazine and a part of the gun to which the magazine is about to be attached, the magazine and the gun being shown separated.

Fig. 3 is a view in some respects similar to Fig. 2, but showing the magazine in operative position on the gun and also showing the position of the operator's hand when about to release the magazine and remove it from the gun.

Fig. 4 is a plan view of the magazine and a part of the gun, the cover of the box being omitted and the magazine being shown empty.

Fig. 5 is a vertical transverse sectional view taken along the line 5—5 of Fig. 3, but showing the magazine in the position which it occupies just before reaching its final operative position on the gun.

Fig. 6 is a top plan view of the movable bottom section with the parts in the position shown in Fig. 5, the bottom section itself being shown in phantom in order that the parts attached thereto may more clearly appear.

Fig. 7 is a fragmentary elevational view taken from the right and showing the depending portion of the magazine at the left side of the gun.

Fig. 8 is a fragmentary view similar to Fig. 5, but showing the magazine in its final operative position.

Fig. 9 is a view somewhat similar to Fig. 6, but showing the parts in the position shown in Fig. 10 and also showing certain parts of the gun.

Fig. 10 is a view similar to Fig. 8, but showing the end of the cartridge feed belt advanced into the gun.

Fig. 11 is a view similar to Fig. 10, but showing the movable bottom section moved to an open position so as to permit the feed belt to be removed from the magazine.

Referring to the drawings 1 represents the casing or box constituting the major portion of the magazine, this box being adapted to contain a cartridge feed belt as already stated and to be mounted on a gun. As concerns some of the features of the invention it is preferable that the magazine be mounted on the gun at the top thereof but as to other features the invention is not necessarily so limited. As concerns some of the features of the invention the exact shape of the box is not essential, but I prefer a saddle-shaped box having a longitudinal recess 2 therein which adapts it to fit over and partly surround the gun. A saddle-shaped box has a reasonably large capacity and the weight is balanced with respect to the center line of the gun. The recess 2 is made large enough to permit the free functioning of the gun mechanism.

In order that the box may be loaded, the top cover 3 thereof is made movable with respect to the other parts. Preferably the cover is hinged to the box proper, hinges 4, 4 being provided for this purpose, but it will be understood that I do not necessarily limit myself to a hinged connection. When a hinged cover is provided as shown, one or more latches 5, 5 are provided for normally holding the cover in closed position.

For convenience in handling the magazine, and particularly for use in attaching it to the gun and removing it therefrom, a handle 6 is provided which is connected to the cover as shown. I have illustrated a handle which consists of a flexible strap, but other forms of handle may be substituted, if preferred.

The magazine embodying my invention is so constructed that it can be grasped in one hand and moved into its final operative position on the gun by a simple generally downward movement, this being in contrast with other belt holding magazines heretofore proposed which have required horizontal movement in one direction or another in order to bring the magazine into its final operative position. In order that the magazine may be properly directed into its final position on the gun, both the magazine and the gun are provided with parts adapted to cooperate for this purpose.

As illustrated and as preferred, the construction is such as to involve a minimum modification of the standard Browning gun. The gun illustrated is that set forth in my patent for automatic machine guns, No. 1,293,021 dated February 4, 1919, but it is to be understood that the invention is not limited to use with this particular gun. As shown most clearly in Figs. 2 and 5, the gun comprises a breech casing 7 and a barrel 8 preferably surrounded by a barrel casing 8ª. The breech casing 7 is provided with a cover 9 which is pivoted to the casing proper at 10, this cover being adapted to be swung upward to expose the cartridge feed channel and also the cartridge extracting and firing mechanism of the gun.

I provide suitable devices for guiding the magazine downward into operative position on the gun and I do not limit myself as concerns the details of these devices. However, I prefer and have shown two brackets 11 and 12 on the gun, the bracket 11 being secured to the breech casing proper and the bracket 12 being secured to the cover 9. Preferably, as illustrated in Figs. 2 and 4, the box 1 is provided with a tongue 13 which is adapted to enter and loosely fit a vertical groove 14 formed in one of the brackets, as for instance the bracket 11. Thus the two brackets 11 and 12 serve to determine the position of the magazine longitudinally of the gun and the tongue 13, cooperating with the walls of the groove 14, serves to determine the position of the magazine laterally of the gun. In putting the magazine in place it may be grasped by one hand, as shown in Fig. 2, and then quickly lowered or dropped into place, it being guided by the brackets and tongue as already described.

An automatically acting latch 15 is preferably provided for holding the magazine in its final operative position, and by preference the latch is so located that it can be released by the operator's hand while engaging the magazine to lift it. Preparatory to removing the magazine from the gun, the operator places his hand under the handle 6 with his fingers extending downward along the front side of the box, as shown in Fig. 3. With his hand in this position his fingers nat-

urally engage the latch so that a slight pressure will release it. Then the magazine can be lifted off.

Preferably the latch 15 is carried by the gun rather than the magazine and, as illustrated, the latch is carried by the bracket 11, being horizontally pivoted thereto at 16. The lower end of the latch is adapted to snap over and engage the top of the tongue 13, and a spring 17 is provided for the purpose of automatically throwing the latch into its operative position and for yieldingly holding it in such position.

As already stated, the magazine embodying my invention is particularly adapted for a gun of the Browning type, such a gun being provided with a transverse feed channel 18 therethrough for receiving a cartridge feed belt. The feed box, whether saddle-shaped or otherwise, has a portion which is located laterally beyond the gun at the side thereof corresponding to the entrance end of the feed channel. Associated with the box are means forming a guide channel adjacent the said laterally located portion of the box and communicating with the interior thereof. The said guide channel has a portion extending laterally approximately to the entrance end of the feed channel in the gun and it may also have a portion extending vertically along the side wall of the box. The means forming the guide channel may be variously constructed but as illustrated the guide channel has the said vertical portion formed by the side wall of the box and by a partition 25 and it has the said laterally extending portion formed by a bottom plate 28 of the box and by a horizontal plate 25[a] constituting an extension of the partition 25.

As illustrated the box projects downward to a position adjacent the extrance end of the feed channel of the gun and is there provided with an exit opening 19 for the cartridge belt at the end of the guide channel as shown in Fig. 8, this opening registering with the said feed channel when the magazine is in its operative position. When the gun is constructed to feed the cartridge belt from left to right, as is customary, the part of the magazine box having the said exit opening will be positioned at the left side of the gun.

The gun has the usual transverse feed slide which is shown at 20, this slide being provided with a pawl 21 which engages the successive cartridges to give the feed belt a step-by-step movement from left to right as the gun is fired. A pivoted pawl 22 is provided to prevent any movement of the belt in the reverse direction.

As shown most clearly in Fig. 5, the partition or guide 25 is recessed at 27 to provide a clearance for the feed slide 20 of the gun. In loading the magazine, the feed belt is arranged in layers in the chamber 23 and is then carried across and arranged in layers in the chamber 24. The advance end of the belt is then threaded into the guide channel 26 to the position shown in Fig. 5. I have shown a metallic belt A of the disintegrating type, but the invention is not limited to use with such a belt.

After the magazine has been moved into its final position on the gun as shown in Fig. 8 it is necessary to advance the forward end of the feed belt into the feed channel 18 in the gun so that it can be engaged by the pawl 21 yieldingly held by the slide 20. For this purpose I provide a device movable relatively to the box, this device being located adjacent the guide channel 26. When the guide channel is formed in part by a section of the bottom of the box as illustrated the said device is preferably carried by the said bottom plate 28.

As illustrated the belt advancing means comprises a slide 29 which is movable transversely of the gun and longitudinally of the feed belt in a slot, preferably a T-slot, formed in the said bottom section 28. The slide carries a spring pressed pawl 30 which extends into the channel 26 so as to engage the belt. It will be observed that in loading the magazine the belt is advanced to a position such that a predetermined number of cartridges, preferably three, are in front of the pawl 30, as shown in Fig. 8. For operating the slide 29 there is provided a lever 31 pivoted to the bottom section 28 at 32. This lever engages at one side with a lug 33 on the slide and at the other side with the downward projecting portion 34 of the slide. The end of the lever 31 extends far enough toward the rear to permit its easy engagement by the thumb of the operator's hand immediately after the box has been put in place as already described. The operator by engaging the lever 31 with his thumb can move the lever toward the right, thus moving the slide 29 and advancing the feed belt far enough to move two cartridges into the feed channel 18 as shown in Fig. 10. The belt is then in position to be engaged by the pawl 21, so that the gun can be operated and fired in the usual manner.

It is to be noted that the guide 25, except for the recess 27 therein, extends to a point closely adjacent the gun, thus guiding the cartridges until they enter the feed channel of the gun. For the purpose of assisting in guiding the belt and the cartridges into the feed channel of the gun, I preferably provide a supplemental guide rib 35 on the partition or guide 25, this rib being most clearly shown in Figs. 7 and 8. The rib 35 engages the cartridges at the smaller ends thereof and serves to prevent any twisting or misalignment of the belt as it enters the feed channel of the gun.

I prefer to provide a safety device for preventing the premature operation of the belt

advancing means which has been described. Obviously if this means were operated before the magazine were put in place on the gun the projecting end of the feed belt would interfere with the movement of the magazine into its operative position. I therefore provide a latch 36 which is pivoted to the bottom section 28 at 37 and which engages the slide 29 to hold it in its outer position. A spring 38 tends to hold the latch in its operative position and the movement of the latch under the influence of the spring is limited by means of a pin 39. The latch 36 is provided with a tail 40 having a cam face 41 at the end thereof, this cam face being so located as to be engaged by a part 42 on the gun when the magazine is moved into its final position. This engagement of the part 42 of the gun with the cam face 41 serves to move the latch 36 in the clockwise direction sufficiently to disengage it from the slide 29. It will thus be seen that the slide can be freely operated by the lever 31 after the magazine has been put in position on the gun, but that the slide cannot be so operated before the magazine has been put in such position.

It is necessary to make provision for obtaining access to the interior of the gun in case the gun jams or fails for any reason to operate. With a gun of the type illustrated access to the interior is obtained by pivotally raising the cover 9. From an inspection of Fig. 3 it will be clear that the cover 9 can be raised to expose the interior of the gun only by also moving the magazine from its normal operative position, and from an inspection of Fig. 10 it will be apparent that the magazine cannot be so moved with the several parts in operative positions as shown and with the feed belt entered in the feed channel. In order to permit the belt to be moved out of its normal position in the laterally extending portion of the guide channel and to therefore permit the magazine to be moved upward, I so construct and mount the said plates forming the said portion of the guide channel that one of them may be moved away from the other. This movement of one plate away from the other permits the belt to be moved out of the guide channel with the end thereof remaining in the feed channel of the gun, and with the belt thus moved the magazine can be moved upward to permit access to the feed mechanism of the gun. As concerns this phase of the invention the details of construction can be varied, but as illustrated the lower plate 28 is movable downward so as to provide a bottom opening through which a portion of the feed belt remaining in the guide channel can move or be moved downward and outward. As illustrated the plate 28 is pivoted to the box proper. I have shown a pivotal connection at 43 having its axis parallel with the gun axis, but I do not limit myself as concerns the exact arrangement or location of the pivot. The location shown at the lower left corner of the box has been found satisfactory, but there may be variations from this location without departing from the spirit of the invention. For holding the pivoted bottom section 28 in its closed position, a suitable latch 44 is provided. As shown, this latch is pivotally mounted on the bottom section 28 at 45 and is adapted to fit into a notch 46 formed in an extension on the rear wall of the feed box. Preferably a stop 28ª is carried by the bottom section 28 to limit the upward movement thereof.

In case it becomes necessary for any reason to obtain access to the interior of the gun, the operator moves the latch 44 to release the bottom section 28 which is then swung downward to the position shown in Fig. 11. A portion of the belt will ordinarily move by gravity to a position approximating that shown in Fig. 11, and this movement of the belt from the magazine may be assisted manually if necessary. As soon as enough of the belt is free from the magazine the magazine can be removed and the gun opened. If desired, the entire belt can be removed from the magazine before the magazine is removed from the gun, but this is not essential.

When the belt advancing means and the parts associated therewith are mounted on the bottom section 28, as preferred and as shown and described, these parts will be carried downward with the bottom section when the said section is moved as above described. This movement of these parts is unobjectionable and may even be advantageous as they are thus gotten out of the way so as not to interfere with the expeditious movement of the belt from the magazine.

The provision of the pivoted bottom section 28 has the further advantage that the loading of the magazine is facilitated. In practice the front end of the belt is pushed through the channel 26 until the back side of the pawl 30 is engaged. Then this section 28 is swung downward and the belt is advanced manually to bring three cartridges ahead of the pawl as already stated. After that the section 28 is returned to closed position and locked.

With a saddle-shaped magazine such as has been shown and described, there has heretofore been a tendency for the belt to jam inside of the box when the gun is tilted laterally, particularly when tilted towards the left. With a magazine of this type as heretofore constructed the parts of the feed belt located in the right hand chamber frequently moved by gravity into the left chamber thus clogging or jamming the entrance into the channel leading to the exit opening. In accordance with my present invention I pro-

ide means whereby this difficulty is entirely liminated.

Between the two chambers 23 and 24 I pro- ide means which form a narrow passageway 7 for the belt, this passageway being only vide enough to receive a single strand of the elt. In conjunction with the passageway I rovide means engaging the belt and resisting the movement thereof, this means being fficient to prevent any movement of the belt hrough the passageway by the action of ravity or as the result of any whipping action of the belt, but not sufficient to prevent he belt from being pulled through the passageway by the ordinary operation of the gun nechanism. As illustrated, a partition 48 is rovided which extends upward between the wo chambers 23 and 24, the before-mentioned passageway 47 being formed between he top of the partition and the under side of he cover 3. As shown, means for resisting he movement of the belt through the passageway 47 comprises a spring 49 which normally projects into the passageway so as to ngage the belt and to be flexed thereby at he passage of each cartridge. Preferably he spring is a leaf spring carried by the cover and projecting downward through a notch 0 therein.

The operation of the magazine in relation o the gun will be fully understood from the oregoing description and a very brief summary will suffice. Preparatory to firing the un the operator places the magazine on the un, moving it to the position shown in Figs. and 8. The latch 15 automatically operates o lock the magazine in place, and the latch 6 is automatically released to permit the belt dvancing means to be moved. As soon as the nagazine is in place the operator advances he feed belt into the gun by moving the lever 1 with his thumb.

The gun is operated in the usual manner, ut in case of any jamming or other trouble naking it necessary to obtain access to the interior of the gun, the bottom section 28 is noved downward and the belt partly removed from the magazine as shown in Fig. 11.

When the feed belt has been entirely withdrawn from the magazine by the normal operation of the gun, or has been at least partly withdrawn by the opening of the bottom section, the magazine is removed by engaging it with one hand as shown in Fig. 3. Without shifting his hand the operator can both release the magazine and remove it.

What I claim is:

1. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun, the said box being adapted to contain a cartridge feed belt and being provided at one side with a guide channel for the belt associated with the said feed channel of the gun, cooperating means associated with the gun and the box respectively for guiding the box in a downward direction into its final operative position on the gun, and means movable relatively to the box for advancing the cartridge feed belt through the guide channel of the box and into the feed channel of the gun.

2. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and comprising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, means associated with the box and adapted to cooperate with parts on the gun for guiding the magazine in a downward direction into its final operative position, and means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel.

3. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun at the top thereof, the said box being adapted to contain a cartridge feed belt and being provided with an exit opening for the said belt positioned in register with the said feed channel of the gun, cooperating means associated with the gun and the box respectively for guiding said box in a downward direction into its final operative position on the gun, and means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel.

4. The combination with an automatic machine gun provided with a breech casing having a transverse feed channel therethrough for a cartridge belt and also having a cover pivoted thereto near the front end, of a cartridge magazine box normally detachably mounted on the gun at the top thereof, the said box being adapted to contain a cartridge feed belt and being provided with an exit opening for the said belt positioned in register with the said feed channel of the gun, lugs carried respectively by the front part of the breech casing and by the pivoted cover for guiding the said box in a downward direction into its final operative position on the gun, and means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel.

5. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably

mounted on the gun at the top thereof, the said box being adapted to contain a cartridge feed belt and being provided at one side with a guide channel for the said belt associated with the said feed channel of the gun, cooperating means associated with the gun and the box respectively for guiding the said box in a downward direction into its final operative position on the gun, and a releasable latch for holding the box in the said operative position, the said latch being positioned to be released by the operator's hand while engaging the magazine to lift it.

6. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun at the top thereof, the said box being adapted to contain a cartridge feed belt and being provided at one side with a guide channel for the belt associated with the said feed channel of the gun, cooperating means associated with the gun and the box respectively for guiding the said box in a downward direction into its final operative position on the gun, and a releasable latch carried by the gun for holding the box in the said operative position, the said latch being positioned to be released by the operator's hand while engaging the box to lift it.

7. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun at the top thereof, the said box being adapted to contain a cartridge feed belt and being provided at one side with a guide channel for the said belt associated with the said feed channel of the gun, cooperating means associated with the gun and the box respectively for guiding the said box in a downward direction into its final operative position on the gun, a handle on the top of the box adapted to engage the back of the operator's hand to facilitate attachment and removal of the magazine, and a releasable latch for holding the box in its aforesaid operative position, the said latch being positioned to be released by the operator's hand while engaged by the said handle.

8. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun at the top thereof, the said box being adapted to contain a cartridge feed belt and being provided with an exit opening for the said belt positioned in register with the said feed channel of the gun, cooperating means associated with the gun and the box respectively for guiding the said box in a downward direction into its final operative position on the gun, a releasable latch for holding the box in the said operative position, the said latch being positioned to be released by the operator's hand while engaging the magazine to lift it, and means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel.

9. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun with a portion located laterally at the side of the gun corresponding to the entrance end of the feed channel, means carried by the box forming a guide channel communicating therewith and extending laterally approximately to the entrance end of the feed channel in the gun, and a device carried by the box and manually movable bodily with respect to both the box and the gun and transversely of the latter for engaging the cartridge belt and moving it longitudinally of the guide channel into the feed channel of the gun.

10. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun with a portion thereof projecting laterally beyond the gun at the side thereof corresponding to the entrance end of the feed channel, means forming a guide channel adjacent the said laterally projecting portion of the box and communicating therewith and extending laterally approximately to the entrance end of the feed channel in the gun, and a manually operable device located below the guide channel and adapted to engage the cartridge belt at the under side thereof, the said device being movable with respect to both the box and the gun and transversely of the latter for moving the cartridge belt longitudinally of the guide channel into the feed channel of the gun.

11. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun and comprising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, means associated with the box and adapted to cooperate with parts on the gun for guiding the magazine into its final operative position, and means carried by the box and bodily movable transversely thereof for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel.

12. For an automatic machine gun having a transverse feed channel therethrough for a

cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and comprising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel, a latch device serving to hold the last said means against movement when the magazine is not in operative position, the said latch device being constructed to be automatically released by engagement with the gun when the magazine is moved into operative position thereon, and a bottom section for the box located immediately adjacent the said exit opening and movable to expose the corresponding portion of the feed belt.

13. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and comprising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, a bottom section for the box located immediately adjacent the said exit opening and pivoted for movement downward about an axis parallel with the gun axis so as to expose the portion of the feed belt adjacent the exit opening, means carried by the said bottom section for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel, and a latch device also carried by the said bottom section and serving to hold the last said means against movement when the magazine is not in operative position, the said latch device being constructed to be automatically released by engagement with the gun when the magazine is moved into operative position thereon.

14. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine normally detachably mounted on the gun at the top thereof and comprising a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned in register with the said feed channel of the gun, means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening into the said feed channel, a latch device serving to hold the last said means against movement when the magazine is not in operative position, the said latch device being constructed to be automatically released by engagement with the gun when the magazine is moved into operative position thereon, and a bottom section for the box located immediately adjacent the said exit opening and movable to expose the corresponding portion of the feed belt.

15. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and comprising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, a guide within the box forming a belt channel leading to and terminating at the said exit opening, and a rib carried by the guide and adapted to engage cartridges in the belt at the smaller ends thereof to prevent twisting and misalignment of the cartridge belt.

16. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun with a portion thereof projecting laterally beyond the gun at the side thereof corresponding to the entrance end of the feed channel, and means forming a guide channel adjacent the said laterally projecting portion of the box and communicating therewith, the said means including two plates forming a portion of the said guide channel which extends laterally approximately to the entrance end of the feed channel in the gun and one of the said plates being movable away from the other to permit the feed belt in the said portion of the channel to move out of its normal position.

17. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine box normally detachably mounted on the gun with a portion thereof projecting laterally beyond the gun at the side thereof corresponding to the entrance end of the feed channel, means forming a guide channel adjacent the said laterally projecting portion of the box and communicating therewith, the said means including two plates forming a portion of the said guide channel which extends laterally aproximately to the entrance end of the feed channel in the gun and one of the said plates being movable away from the other to permit the feed belt in the said portion of the channel to move out of its normal position, and a device carried by one of the said plates and movable longitudinally of the guide channel for moving the belt along the guide channel and into the feed channel of the gun.

18. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and com-

prising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel, and a bottom section for the box located immediately adjacent the said exit opening and movable to expose the corresponding portion of the feed belt.

19. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and comprising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel, and a bottom section for the box located immediately adjacent the said exit opening and pivoted for movement downward about an axis parallel with the gun axis so as to expose the portion of the feed belt adjacent the exit opening.

20. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and comprising in combination a box adapted to contain a cartridge feed belt, and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, a bottom section for the box located immediately adjacent the said exit opening and pivoted for movement downward about an axis parallel with the gun axis so as to expose the portion of the feed belt adjacent the exit opening, and means carried by the said bottom section for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel.

21. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine adapted to engage the gun at the top thereof and comprising in combination a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned to register with the said feed channel of the gun when the magazine is in operative position, a bottom section for the box located immediately adjacent the said exit opening and pivoted for movement downward about an axis parallel with the gun axis so as to expose the portion of the feed belt adjacent the exit opening, a slide on the bottom section movable toward and from the exit opening, a pawl on the slide for advancing the end of a cartridge feed belt through the opening and into the aforesaid feed channel, and a manually operable lever pivoted on the bottom section and engaging the slide to operate it.

22. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine normally detachably mounted on the gun at the top thereof and comprising a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned in register with the said feed channel for the gun, means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel, and a bottom section for the box located immediately adjacent the said exit opening and movable to expose the corresponding portion of the feed belt.

23. The combination with an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, of a cartridge magazine normally detachably mounted on the gun at the top thereof and comprising a box adapted to contain a cartridge feed belt and provided with an exit opening therefor positioned in register with the said feed channel of the gun, a bottom section for the box located immediately adjacent the said exit opening and pivoted for movement downward about an axis parallel with the gun axis so as to expose the portion of the feed belt adjacent the exit opening, and means carried by the said bottom section for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel.

24. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a box adapted to engage the gun at the top thereof and projecting laterally at both sides of the gun, the said box being adapted to contain a cartridge feed belt and being provided along one side wall with a guide channel communicating with the interior and associable with the said feed channel of the gun when the magazine is in operative position, and means within the box between the side walls thereof and spaced laterally from the said guide channel and forming a narrow passageway for the belt between the two side sections of the box.

25. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a saddle-shaped box adapted to fit over and engage the gun at the top thereof, the said box being adapted to contain a cartridge feed belt and being provided along one side wall with a guide channel positioned to be associated with the said

feed channel of the gun when the magazine is in operative position, and means within the box between the side walls thereof and spaced laterally from the said guide channel and forming a narrow passageway for the belt between the two side sections of the box.

26. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a saddle-shaped box adapted to fit over and engage the gun at the top thereof, the said box being also adapted to contain a cartridge feed belt and being provided along one side wall with a guide channel communicating with the interior and positioned to register with the said feed channel of the gun when the magazine is in operative position, and means within the box between the side walls thereof and spaced laterally from the said guide channel and forming a narrow passageway for the cartridge belt between the two side sections of the box, and means adjacent the said passageway for yieldably resisting the movement of the cartridge belt therethrough.

27. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a saddle-shaped box adapted to fit over and engage the gun at the top thereof, the said box being also adapted to contain a cartridge feed belt and being provided along one side wall with a guide channel communicating with the interior and positioned to register with the said feed channel of the gun when the magazine is in operative position, a top cover for the box movably connected therewith so as to be adapted to expose the interior, means within the box between the side walls thereof and spaced laterally from the said guide channel and cooperating with the cover when the latter is in closed position to form a narow passageway for the cartridge belt between the two side chambers of the box, and means adjacent the said passageway for yieldably resisting the movement of the cartridge belt therethrough.

28. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a saddle-shaped box adapted to fit over and engage the gun at the top thereof, the said box being also adapted to contain a cartridge feed belt and being provided at one side with a belt channel terminating in an exit opening positioned to register with the said feed channel of the gun when the magazine is in operative position, a hinged cover for the box, means within the box spaced from the said belt channel and cooperating with the cover when the latter is in closed position to form a narrow passageway for the cartridge belt between the two side chambers of the box, and a spring adjacent the said passageway for engaging the cartridge belt to yieldably resist its movement through the said passageway.

29. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a saddle-shaped box adapted to fit over and engage the gun at the top thereof, the said box being also adapted to contain a cartridge feed belt and being provided at one side with a belt channel terminating in an exit opening positioned to register with the said feed channel of the gun when the magazine is in operative position, a hinged cover for the box, a partition within the box spaced from the said belt channel and cooperating with the cover when the latter is in closed position to form a narrow passageway for the cartridge belt between the two side chambers of the box, and a spring carried by the cover adjacent the partition for engaging the cartridge belt to yieldably resist its movement through the said passageway.

30. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a saddle-shaped box adapted to fit over and engage the gun at the top thereof, the said box being also adapted to contain a cartridge feed belt and being provided at one side with a belt channel terminating in an exit opening for the said belt positioned to register with the said feed channel of the gun when the magazine is in operative position, means carried by the box and movable relatively thereto for advancing the end of a cartridge feed belt through the said exit opening and into the said feed channel, means within the box spaced from the said belt channel and forming a narrow passageway for the cartridge belt between the two side chambers of the box, and means adjacent the said passageway for yieldably resisting the movement of the cartridge belt therethrough.

31. For an automatic machine gun having a transverse feed channel therethrough for a cartridge belt, a cartridge magazine comprising in combination a saddle-shaped box adapted to fit over and engage the gun at the top thereof, the said box being also adapted to contain a cartridge feed belt and being provided at one side with a belt channel terminating in an exit opening for the said belt positioned to register with the said feed channel of the gun when the magazine is in operative position, a bottom section for the box located immediately adjacent the said exit opening and pivoted for movement downward about an axis parallel with the gun axis so as to expose the portion of the feed belt adjacent the exit opening, means carried by the said bottom section for advancing the end of a cartridge feed belt through the said

exit opening and into the said feed channel, means within the box spaced from the said belt channel and forming a narrow passageway between the two side sections thereof, and means adjacent the said passageway for yieldably resisting the movement of the cartridge belt therethrough.

This specification signed this 12th day of December, 1925.

JOHN M. BROWNING.