April 18, 1944. G. IRONSIDE 2,346,845

MACHINE GUN MOUNT

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Fig. 1

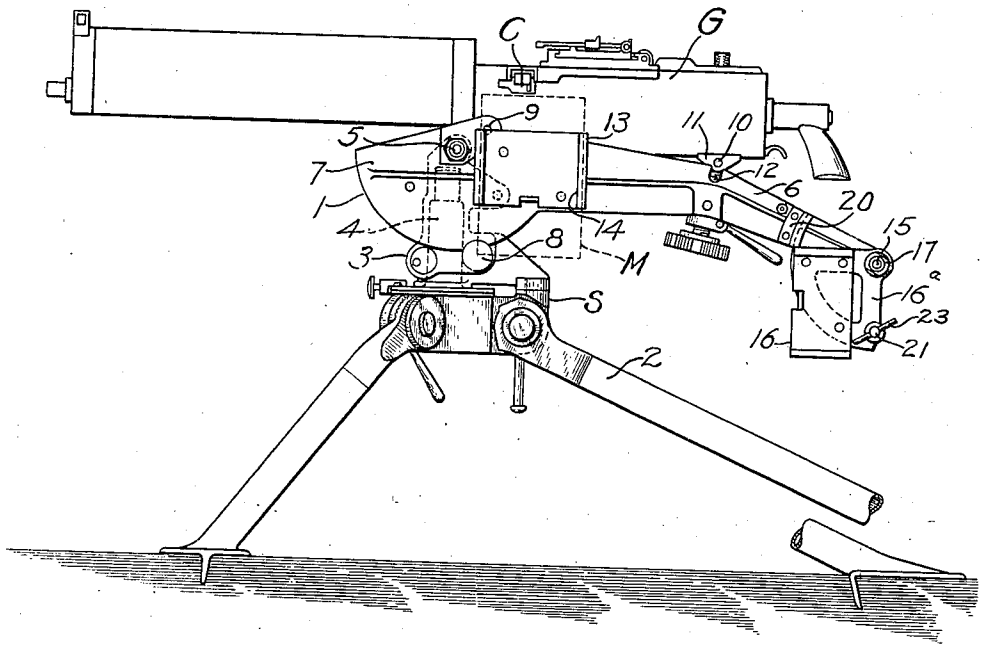
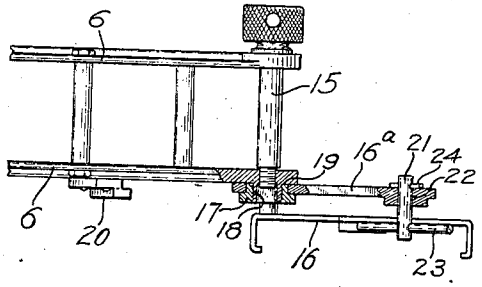


Fig. 2



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Fig. 3

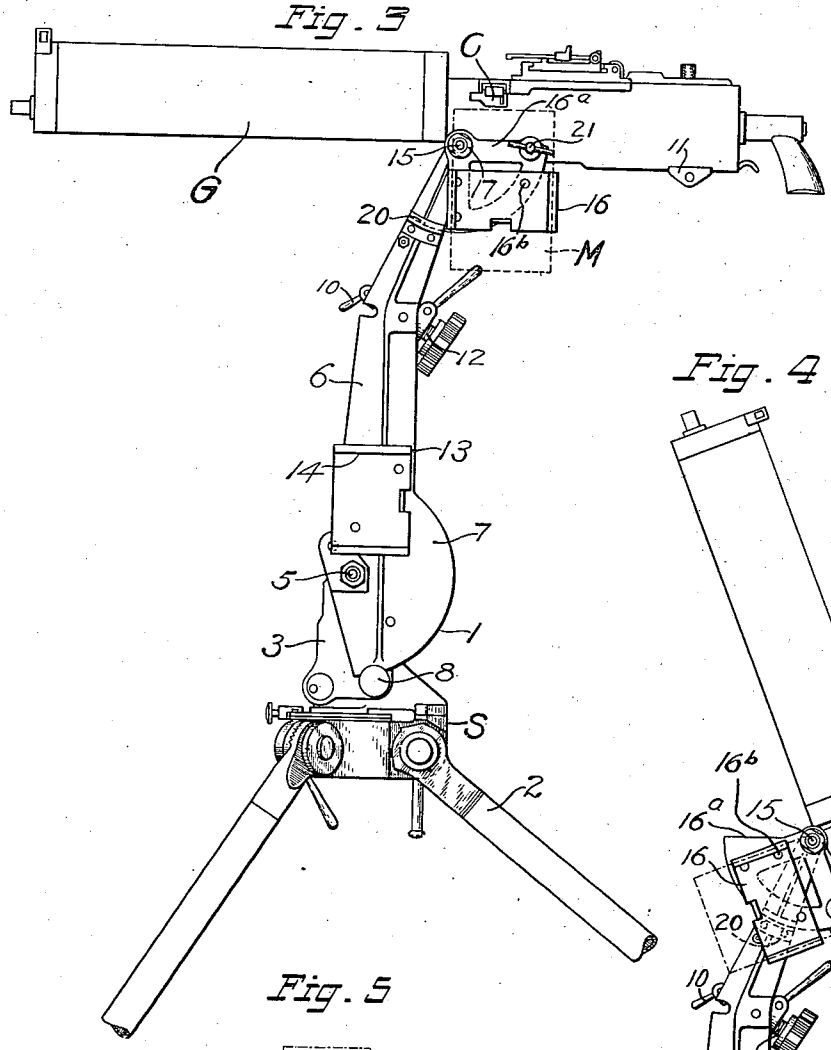


Fig. 4

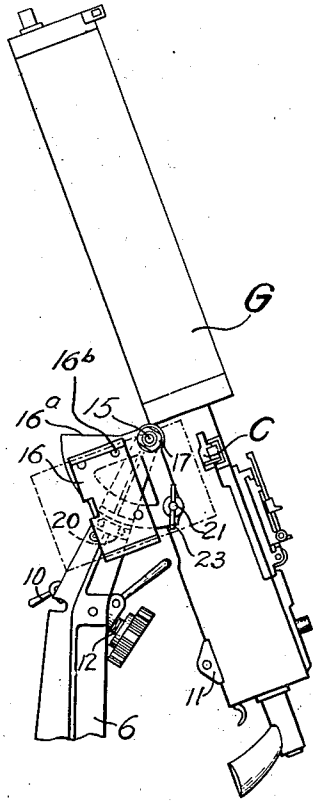
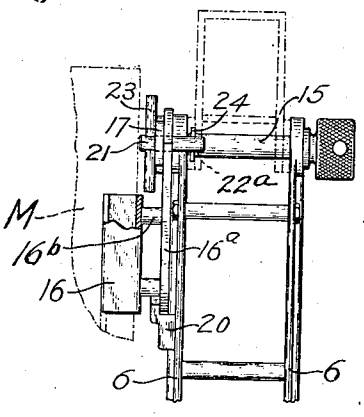


Fig. 5



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MACHINE GUN MOUNT

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Application April 24, 1940, Serial No. 331,322

10 Claims. (Cl. 89—40)

This invention relates to machine gun mounts of the type adapted for anti-aircraft firing which include a magazine supporting bracket movably carried by the mount and connectible to the gun for movement therewith such that the magazine and feed channel of the gun are at all times similarly relatively positioned when the gun is mounted in anti-aircraft firing position. A mount of this type is illustrated and claimed in my copending application Serial No. 229,141 filed September 9, 1938, now Patent No. 2,210,538.

One of the objects of the invention is to provide in a machine gun mount of the above described character means for connecting the magizine supporting bracket to the gun such that the magazine can not occupy its normal position relatively to the gun feed channel except when the supporting bracket is properly connected to the gun.

Another object is to provide in a mount of the above character means for connecting the magazine supporting bracket to the gun such that the bracket can not be disconnected from the gun so long as the magazine occupies its normal position relatively to the gun feed channel.

Other objects and advantages of the invention will be readily apparent to those skilled in the art.

In the accompanying drawings I have shown the now preferred embodiment of the invention, but it will be understood that the drawings are intended for illustrative purposes only and are not to be construed as defining or limiting the scope of the invention, the claims forming a part of this specification being relied upon for that purpose.

In the drawings:

Fig. 1 is a side elevational view of a machine gun mount embodying the invention and showing a machine gun mounted thereon in ground firing position.

Fig. 2 is an enlarged fragmentary plan view, partly in section, of the rearward portion of the mount.

Fig. 3 is an elevational view similar to that of Fig. 1 but with the gun and mount in anti-aircraft firing position.

Fig. 4 is a fragmentary view showing the gun in high angle firing position.

Fig. 5 is a fragmentary rear end elevational view of the mount as shown in Fig. 3, the breech of the gun being skeletonized.

The phrase "ground firing" is used herein to designate that type of fire in which the line of sight is substantially horizontal, and the phrase "anti-aircraft firing" is used to designate that type of fire in which the line of sight is at a relatively high angle such as when firing at aircraft. In both instances the phrases are used merely for the purpose of description and not limitation.

Referring to the drawings, G indicates a machine gun which may be of any desired type, although for the purposes of this specification I have illustrated a gun of the type shown in the J. M. Browning Patent No. 1,293,021. The gun is held in firing position by a cradle 1 which is carried by a support generally indicated at S. The illustrated support comprises a tripod 2 and a head 3. The head is secured to the tripod and is rotatable about the axis of a pintle 4, suitable means being provided for locking the head to the tripod in any desired position of azimuth.

The cradle 1 which is pivotally secured to the head by a pin 5 includes two main side plates 6 secured to each other in spaced relationship in any suitable manner. The side plates preferably include segmental portions 7 adapted to be clamped by a bolt 8 to hold the cradle in a plurality of ground firing positions.

For ground firing the gun is mounted as shown in Fig. 1. A main trunnion pin 9 which extends through openings constituting gun trunion bearings in the cradle side plates 6 and through the main trunnion block of the gun pivotally secures the gun to the cradle. Another pin 10 serves to secure the rear portion of the gun to a block 11 adjustably supported between the side plates 6 by an adjusting screw 12. An ammunition magazine bracket 13 is secured to one of the cradle side plates 6 and serves to support an ammunition box M in proper relationship with respect to the feed channel C of the gun when mounted for ground firing. The bracket 13 is of the usual construction in which the magazine is assembled with the bracket by sliding the former downward so that flanges 14 on the bracket are received in cooperating grooves in the sides of the magazine.

When the gun is to be used for anti-aircraft firing the pins 9 and 10 are removed to permit dismounting of the gun from the cradle. The cradle is then swung to the position shown in Fig. 3 and locked in this position by any desired means. The cradle side plates 6 are provided with gun trunnion bearings adjacent their rearward ends and a trunnion pin 15 serves to pivotally mount the gun as shown in Fig. 3.

A second ammunition magazine supporting means, such as bracket 16 generally similar to the bracket 13, is provided for holding a magazine

in proper relationship to the feed channel C of the gun when the latter is mounted for anti-aircraft firing. The bracket 16 is securable to the gun that it will have movement corresponding to that of the gun as the latter pivots on the trunnion pin 15. In the construction illustrated the bracket 16 also comprises a segmental plate 16a fixed to bracket 16 by a plurality of pins 16b. Plate 16a in turn is pivotally supported by a nut 17 threaded onto boss 18, the nut having a bearing surface 19 on the exterior thereof and the bearing surface being concentric with the axis of trunnion pin 15. A guide bracket 20 is preferably secured to one of the cradle side plates 6 for engaging the lower arcuate edge of the segmental plate.

Referring particularly to Figs. 2, 3 and 5, there is shown the now preferred construction for connecting the magazine supporting bracket 16 to the gun when the latter is mounted for anti-aircraft firing. This connecting means comprises a pin 21 which is carried by the plate 16a and which is slidably transversely thereof in the aperture 22 into and out of engagement with an aperture 22a in one side wall of the gun. The pin is provided with means such as the handle 23 and cross-pin 24 for limiting its transverse movement and also render the pin 21 normally inseparable from the plate 16a of bracket 16, whereby the pin is permanently carried by said bracket. As is apparent from the drawings, the limits of movement of the pin 21 are such that unless the pin has been moved to the right (as viewed in Fig. 5) as far as possible, the left hand end of the pin will project into the path of travel of the ammunition magazine when it is being moved to its normal position (that is, the position in which it is properly related to the feed channel) while being assembled with the bracket 16. When the gun G, bracket 16, and magazine M are in the relative positions shown in Fig. 5, the magazine serves to prevent sufficient leftward movement of the pin to disconnect the bracket from the gun.

It will be apparent that the described construction effectively and positively prevents the magazine from being placed in its normal position relatively to the machine gun feed channel unless the bracket has been previously connected with the gun, and also that the construction is such that the magazine and feed channel of the gun cannot be accidentally moved out of properly related position so long as the magazine occupies its normal position in which blocks leftward movement of the pin 21.

Various changes and modifications within the scope of the appended claims will be apparent to those skilled in the art.

What I claim is:

1. In a machine gun mount of the type comprising a cradle adapted to movably support in firing position a machine gun having a feed channel, the combination of a magazine supporting bracket movably mounted on the cradle and adapted to normally support a magazine adjacent the feed channel of the gun when the gun is mounted in firing position, and connecting means carried by the mount and movable with respect to said bracket to and from a predetermined position in which it secures said bracket to the gun to cause corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, said connecting means having a portion which is positioned to obstruct movement of the magazine to its normally supported position except when said connecting means is substantially in said predetermined position.

2. In a machine gun mount of the type comprising a cradle adapted to movably support in firing position a machine gun having a feed channel, the combination of a magazine supporting bracket movably mounted on the cradle and adapted to normally support a magazine adjacent the feed channel of the gun when the gun is mounted in firing position, and connecting means carried by the mount and movable with respect to said bracket to and from a predetermined position in which it secures said bracket to the gun to cause corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, said magazine when in its normally supported position being adjacent a portion of said connecting means to obstruct movement thereof from its said predetermined position.

3. In a machine gun mount of the type comprising a cradle adapted to movably support in firing position a machine gun having a feed channel, the combination of a magazine supporting bracket movably mounted on the cradle and adapted to normally support a magazine adjacent the feed channel of the gun when the gun is mounted in firing position, and connecting means carried by the mount and movable with respect to said bracket to and from a predetermined position in which a portion of said connecting means is received within an opening in said gun and secures said bracket to the gun to cause corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, said magazine when in its normally supported position being adjacent another portion of said connecting means to obstruct movement thereof from said predetermined position and said another portion thereof also serving to obstruct movement of the magazine to its normally supported position except when the connecting means is in its said predetermined position.

4. In a machine gun mount of the type comprising a cradle adapted to movably support in firing position a machine gun having a feed channel, the combination of a magazine supporting bracket movably mounted on the cradle and adapted to normally support a magazine adjacent the feed channel of the gun when the gun is mounted in firing position, and connecting means inseparably carried by said bracket and movable with respect to said bracket to and from a predetermined position in which it secures said bracket to the gun to cause corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, said connecting means having a portion which is positioned to obstruct movement of the magazine to its normally supported position except when said connecting means is substantially in said predetermined position.

5. In a machine gun mount of the type comprising a cradle adapted to movably support in firing position a machine gun having a feed channel, the combination of a magazine supporting bracket movably mounted on the cradle and adapted to normally support a magazine adjacent the feed channel of the gun when the gun is mounted in firing position, and connecting means inseparably carried by said bracket and movable with respect to said bracket to and from a predetermined position in which it secures said bracket to the gun to cause corresponding move-

ment of the gun and bracket whereby the two are always similarly relatively positioned, said magazine when in its normally supported position being adjacent a portion of said connecting means to obstruct movement thereof from its said predetermined position.

6. In a machine gun mount of the type comprising a cradle adapted to movably support in firing position a machine gun having a feed channel, the combination of a magazine supporting bracket movably mounted on the cradle and adapted to normally support a magazine adjacent the feed channel of the gun when the gun is mounted in firing position, and connecting means inseparably carried by said bracket and movable with respect to said bracket to and from a predetermined position in which a portion of said connecting means is received within an opening in said gun and secures said bracket to the gun to cause corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, said magazine when in its normally supported position being adjacent another portion of said connecting means to obstruct movement thereof from said predetermined position and said another portion thereof also serving to obstruct movement of the magazine to its normally supported position except when the connecting means is in its said predetermined position.

7. In a machine gun mount of the type comprising a cradle adapted to movably support in firing position a machine gun having a feed channel and an aperture in one wall thereof, the combination of a magazine supporting bracket movably mounted on the cradle for normally supporting a magazine adjacent the feed channel of the gun when mounted in firing position, said bracket when in normal supporting position being spaced a given distance from said gun, and a pin of a length greater than the space between the bracket and the gun slidably carried by the bracket for movement transversely thereof to and from a predetermined position in which one end of said pin is received in the aperture of the wall of the gun to secure the bracket to the gun and cause corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, the other end of said pin being adapted to project from the bracket and prevent the magazine from occupying its normally supported position when the first end of said pin is removed from said aperture in the gun.

8. In a machine gun mount of the type comprising a cradle adapted to movably support a machine gun in anti-aircraft firing position, the combination of a magazine supporting bracket movably mounted on the cradle for normally supporting a magazine adjacent the feed channel of the machine gun when mounted in anti-aircraft firing position, and a pin permanently carried by the mount and slidable transversely thereof to and from a position in which it connects said bracket to the gun for causing corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, said pin except when properly connecting said bracket to the gun being positioned to prevent the magazine from occupying its normal supported position.

9. In a machine gun mount of the type comprising a cradle adapted to movably support a machine gun in anti-aircraft firing position, the combination of a magazine supporting bracket movably mounted on the cradle for normally supporting a magazine adjacent the feed channel of the machine gun when mounted in anti-aircraft firing position, and a pin permanently carried by the mount and slidable transversely thereof to and from a position in which it connects said bracket to the gun for causing corresponding movement of the gun and said bracket whereby the two are always similarly relatively positioned, said pin being slidable from said position only upon movement of the magazine from its normal supported position.

10. In a machine gun mount of the type comprising a cradle adapted to movably support a machine gun in anti-aircraft firing position, the combination of a magazine supporting bracket movably mounted on the cradle for normally supporting a magazine adjacent the feed channel of the machine gun when mounted in anti-aircraft firing position, and a pin permanently carried by the mount and slidable transversely thereof to and from a position in which it connects said bracket to the gun for causing corresponding movement of the gun and bracket whereby the two are always similarly relatively positioned, said pin except when properly connecting said bracket to the gun being positioned to prevent the magazine from occupying its normally supported position and being slidable from its said connecting position only upon movement of the magazine from its normal supported position.

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