J. S. PEOPLES.

MACHINE GUN MOUNT.

APPLICATION FILED NOV. 26, 1918.

1,374,862. Patented Apr. 12, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

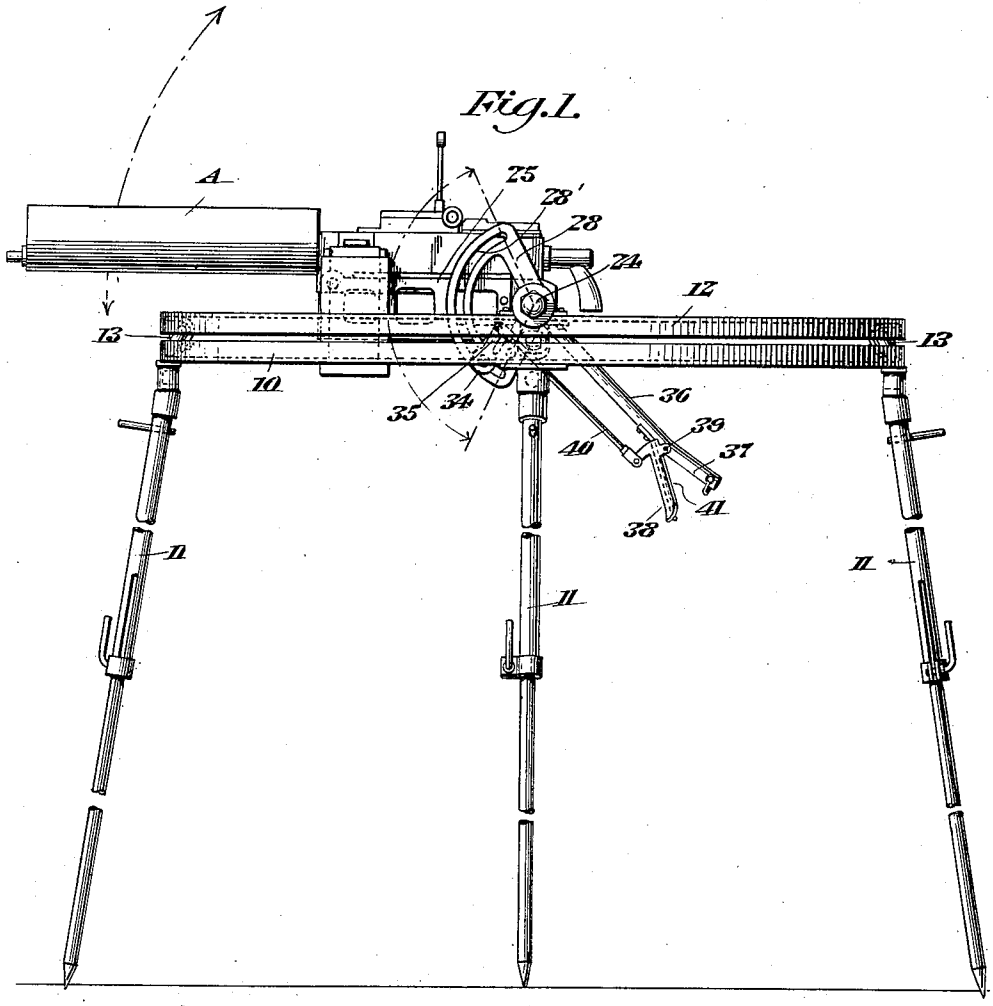
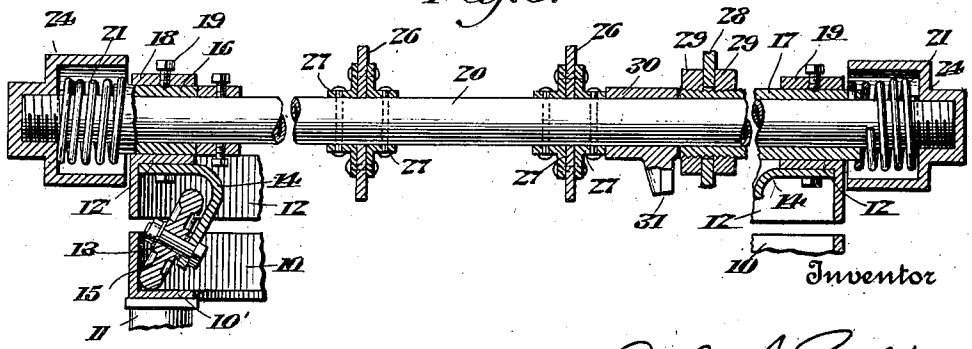


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 7.

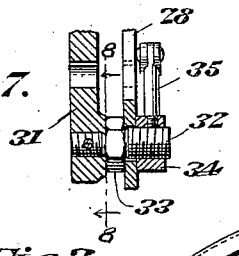


Fig. 8.

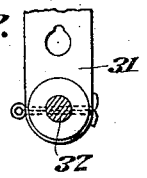


Fig. 2.

Fig. 4.

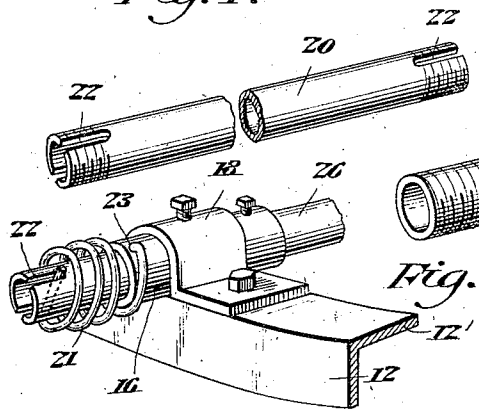


Fig. 6.

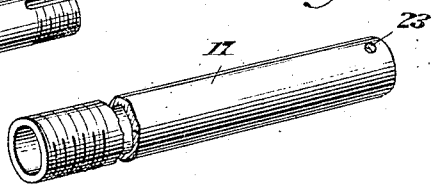


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN S. PEOPLES, OF THE UNITED STATES ARMY, ASSIGNOR TO NEWTON D. BAKER, SECRETARY OF WAR, TRUSTEE.

MACHINE-GUN MOUNT.

1,374,862. Specification of Letters Patent. Patented Apr. 12, 1921.

Application filed November 26, 1918. Serial No. 264,225.

(FILED UNDER THE ACT OF MARCH 3, 1883, 22 STAT. L., 625.)

To all whom it may concern:

Be it known that I, JOHN S. PEOPLES, captain, Ordnance Department, U. S. A., at present stationed at Washington, District of Columbia, have invented an Improvement in Machine-Gun Mounts, of which the following is a specification.

The invention described herein may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without payment of any royalty thereon.

This invention relates to machine gun mounts and refers more particularly to that type of mount adapted for supporting a machine gun for anti-aircraft warfare.

The principal object of the invention is to provide a light collapsible structure for the support of a machine gun, wherein means is provided for the complete rotation of the gun in traverse and also the ready adjustment thereof for elevation from the horizontal to the perpendicular.

Another object of the invention is to provide a counter-balancing device for rendering the elevation of the gun speedy and easy of accomplishment, the weight of the gun in descending from the perpendicular to the horizontal serving to "wind up" the counter-balancing springs, so that the elevation of the gun may be effected in part by the energy thus stored in the springs.

Still another object is to provide my mount with means for the automatic locking of the gun at any desired angle of elevation at which it may be swung by the operator, thus to remain until the unlocking lever is actuated to release the same.

With the foregoing and other objects in view, my invention comprises the new and useful details of construction and arrangement, which will be hereinafter fully described, illustrated in the annexed drawings, and pointed out more specifically in the appended claims.

In the accompanying drawings, wherein the preferred embodiment of my invention is shown, like reference characters refer to like or corresponding parts throughout the several views.

In the drawings:—

Figure 1 is a side elevation of the machine gun mount of my invention.

Fig. 2 is a top plan view of my device.

Fig. 3 is a fragmentary sectional view of the pivoting means for the machine gun by which the elevation and deflection of the gun is attained.

Fig. 4 is a detail perspective view of the rotatable pivoting shaft upon which the machine gun is mounted.

Fig. 5 is a fragmentary perspective view of the pivoting shaft and mounting means therefor.

Fig. 6 is a detail perspective view of one of the bearing sleeves for the pivoting shaft.

Fig. 7 is a longitudinal sectional detail of the locking means for the gun.

Fig. 8 is a sectional view through the locking pin, showing the elevating arm for the machine gun in fragmentary elevation, the view being taken on line 8—8 of Fig. 7.

Referring now to the drawings, my device comprises a pair of similar rings 10 and 12 mounted in parallel relation and carried in substantially horizontal planes. Each of said rings is preferably angular in cross-section, the upper ring 12 having an in-turned flange 12′ on its upper face and the lower ring 10 having an in-turned flange 10′ on its lower face. The lower ring is supported in any suitable manner on a plurality of removable telescoping legs 11, preferably flared outwardly at their pointed bottom ends to give added stability to the mount.

Upper ring 12 is mounted to rotate upon flange 10′ of the lower ring by means of a plurality of roller bearings 13 pivoted to carriage brackets 14 fixed to the lower face of flange 12′ of the upper ring. Bearings 13 are preferably in the form of wheels mounted to rotate on axles 15 fixed in the carriage brackets, the wheels being carried at an angle so that the rims thereof will bear on the inner surface of ring 10 and on the upper face of flange 10′, thus preventing the lateral displacement of the upper ring with reference to the stationary lower ring.

To the upper face of flange 12′, on a line passing through the center of ring 12, I mount bearing sleeves 16 and 17 by means of bearing brackets 18. Sleeves 16 and 17 are secured to said brackets by set screws 19, or other suitable means. In sleeves 16 and

17 is mounted a pivoting shaft 20 extending at each end beyond the ends of said sleeves and having fixed thereto, on each end, one end of one of the coiled springs 21, the other ends of said springs being engaged by the ends of the respective sleeves 16 and 17. The outer ends of shaft 20 are slotted as at 22 and the outer ends of sleeves 16 and 17 are perforated as at 23 to receive the respective inturned ends of the springs 21. The ends of shaft 20 are threaded and sleeve nuts 24 are secured thereon to hold the springs firmly in place.

The machine gun A is mounted on shaft 20 by means of a pair of spaced-apart cradle plates 25, having off-set brackets 26 perforated to receive the shaft 20. Sleeved plates 27 are fixed on each side of each of the off-set brackets, said plates being bolted, or similarly fixed to the shaft.

In assembling the springs 21 on the aforesaid shaft and bearing sleeves, the cradle plates are swung upward with the shaft to a perpendicular position and the springs then engaged in place. It will thus be seen that when the gun is mounted on the cradle plates, the lowering of the gun and pivoting of shaft 20 will serve to bring the springs into tension, thus storing up energy therein so that the elevation of the gun may be effected with the assistance of that energy. The lowering thereof will be easy of accomplishment by reason of the added weight of the gun assisting in the "winding up" of the springs.

Bearing sleeve 17 is elongated on its inner end to receive a perforated quadrant 28, The end of the sleeve is threaded and nuts 29 are threaded thereon, one on each side of the quadrant, to hold the same in fixed relation to the sleeve. Fixed to shaft 20 between the end of sleeve 17 and the cradle, I provide a bell crank unit 30, a locking arm 31 on the outer side thereof, having a perforated head positioned to swing in the arc of an arcuate perforation 28′ in quadrant 28. A locking screw 32 is carried in the perforated head of said locking arm and extends through the arcuate perforation 28′, a nut 33 on the screw being interposed between the arm and quadrant. A jam nut 34 is screwed to the outer end of locking screw 32 and an arm 35 is fixed thereto in position to swing the nut into and out of clamping engagement with the stationary quadrant. A manually operable actuating arm 36 is carried by the bell crank lever unit and a hand grip portion 37 is provided on its outer end in position to be grasped by the gunner. A spring-actuated locking lever 38 is pivoted at 39 to said hand grip portion and a connecting link 40 is pivoted at one end to the locking lever and at its other end to the aforementioned jam nut arm 35. Spring 41 is positioned between grip 37 and the lever 38 to normally press the outer end of the lever outward, thus to normally direct jam nut arm 35 into the locking position whereby jam nut 34 will engage the quadrant to lock the elevating mechanism in stationary relation with the fixed parts of the mount. It will thus be seen that in order to swing the gun vertically about the pivoting line, it will be necessary for the operator to first release the locking mechanism by pressing lever 38 toward grip 37, thus actuating jam nut 34 from engagement with the fixed quadrant, thereby freeing the gun for elevation or deflection by the actuating arm 36.

The grip 37 of actuating arm 36 is positioned rearwardly of the mounting shaft 20, thus adapting arm 36 to the control of the rotation of ring 12 about the fixed axis of the supporting ring 10. It will thus be seen that the gunner, standing within the ring, may actuate the lever 36 with his left hand to swing the gun for traverse, and likewise control the angle of elevation at the same time by the same means, the right hand being free to operate the gun.

Having thus described my invention, what I claim as new and desire to cover by Letters Patent is:—

1. A gun mount, including a circular track, a mounting ring positioned above and in parallel relation to the track, roller bearings between the ring and the track, a shaft journaled on said ring, gun supporting members fixed to the shaft, counter-balancing springs fixed to the shaft and its bearings to normally urge the shaft toward gun elevating position, means for locking the shaft against movement under the impulse of the springs and a lever for rocking the shaft and rotating the ring upon the track.

2. A gun mount, including a circular track, a mounting ring, roller bearings between the ring and the track, a shaft journaled on the ring and adapted to support a gun, counter-balancing springs fixed to the shaft and its bearings to normally urge the shaft toward gun elevating position, means for locking the shaft against movement under the impulse of the springs, and a lever for rocking the shaft and rotating the ring upon the track.

3. A gun mount, including a circular track, a mounting ring adapted for rotation on the track, a shaft journaled on the ring and adapted to support a gun, means normally tending to rock the shaft toward gun elevating position, means for locking the shaft against rotary movement about its longitudinal axis and a lever for rocking the shaft and rotating the ring on the track.

4. A gun mount, including a support rotatable in a substantially horizontal plane, a shaft journaled on the support and adapt-

ed to support a gun, resilient elements fixed to the shaft and its bearings normally tending to rock the shaft toward gun elevating position, means for locking the shaft against movement under the impulse of the resilient elements and manual means for rocking the shaft and rotating the support.

5. A gun mounting including a support rotatable in a substantially horizontal plane, a shaft journaled on the support, gun supporting members fixed to the shaft, counter-balancing springs fixed to the shaft and its bearings to normally urge the shaft toward gun elevating position, means for locking the shaft against movement under the impulse of the springs and a lever for rocking the shaft and rotating the support.

JOHN S. PEOPLES.