May 7, 1940. R. J. LENNON 2,199,410

GUN MOUNT

Filed April 7, 1937 2 Sheets-Sheet 1

Fig. 1.

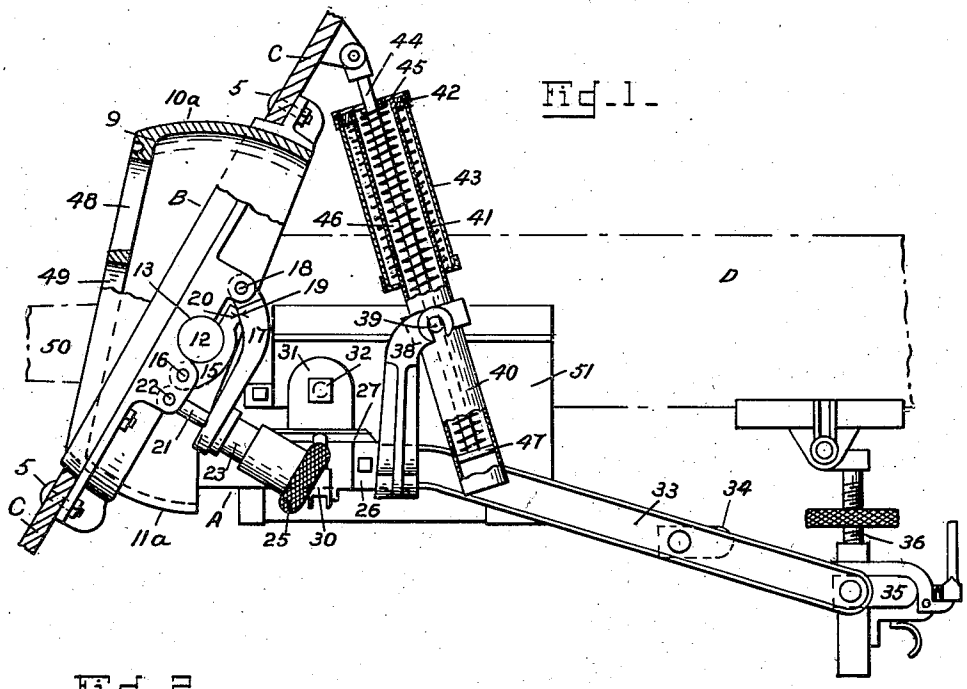
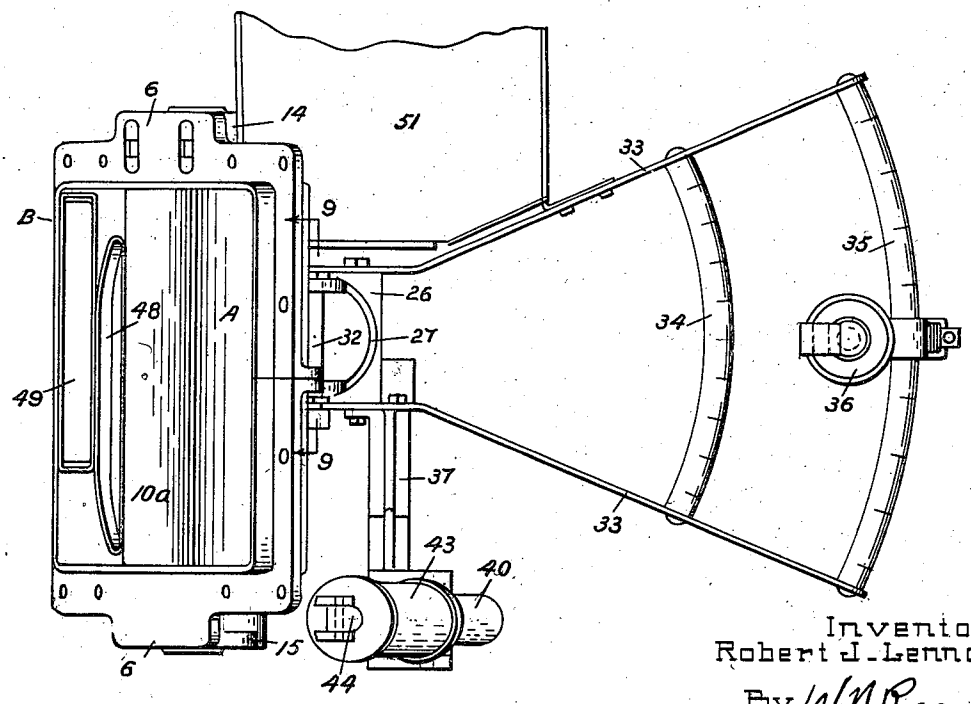


Fig. 2.



Inventor
Robert J. Lennon
By W. N. Roach
Attorney

May 7, 1940. R. J. LENNON 2,199,410

GUN MOUNT

Filed April 7, 1937 2 Sheets-Sheet 2

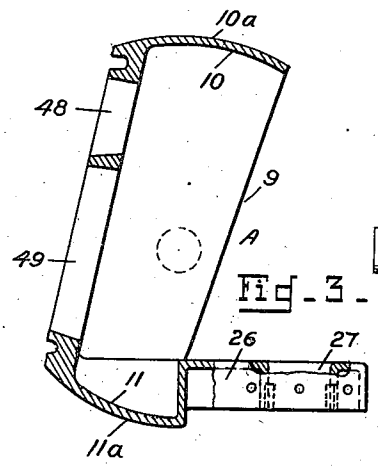


Fig. 3.

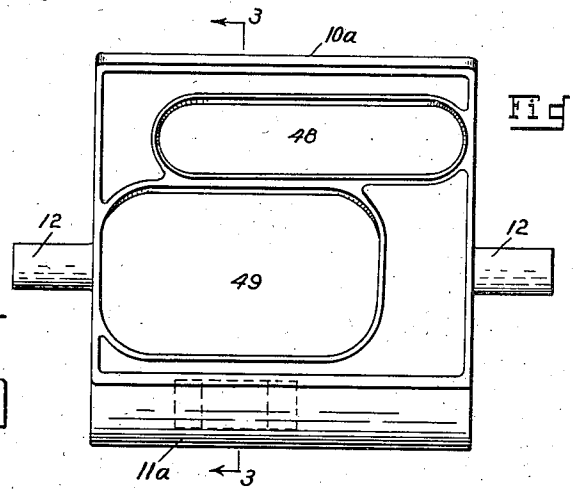


Fig. 4.

Fig. 6.

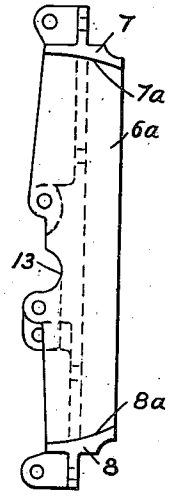


Fig. 5.

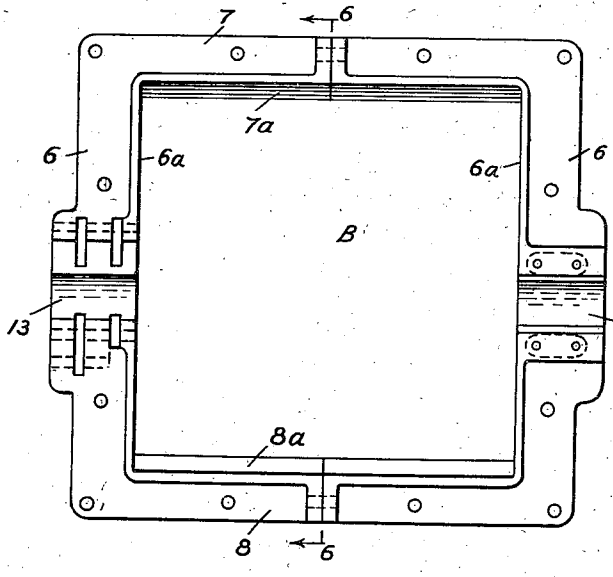


Fig. 7.

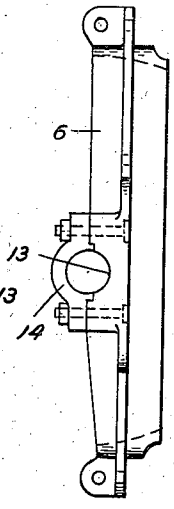


Fig. 8.

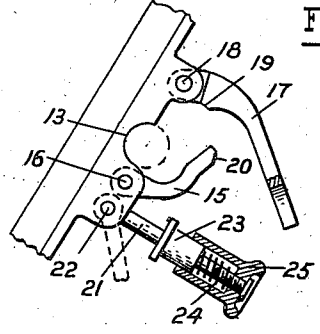
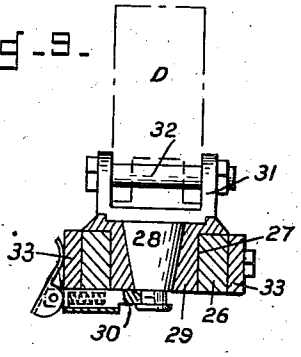


Fig. 9.



Inventor
Robert J. Lennon
By W. N. Roach
Attorney

Patented May 7, 1940

2,199,410

UNITED STATES PATENT OFFICE

2,199,410

GUN MOUNT

Robert James Lennon, East Moline, Ill.

Application April 7, 1937, Serial No. 135,509

2 Claims. (Cl. 89—37)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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

This invention relates to a gun mount.

The purpose of the invention is to provide a simple and easily constructed gun mount which may be readily and conveniently applied to the turret or armored wall of a vehicle and which will afford ample movement in traverse and elevation. This is accomplished by providing a cradle for mounting the gun in traverse and limited elevation and including in the cradle a parallel-sided shield which is trunnioned in the wall of the vehicle.

To these and other ends, the invention consists in the construction, arrangement and combination of elements described hereinafter and pointed out in the claims forming a part of this specification.

A practical embodiment of the invention is illustrated in the accompanying drawings, wherein:

Fig. 1 is a view in side elevation and partly in section of the improved gun mount.

Fig. 2 is a plan view.

Fig. 3 is a sectional view of the shield taken on the line 3—3 of Fig. 4.

Fig. 4 is a view in front elevation.

Fig. 5 is a view in rear elevation of the frame.

Fig. 6 is a view on the line 6—6 of Fig. 5.

Fig. 7 is a view in elevation of the right side of the frame.

Fig. 8 is a view of the trunnion brake with the parts open.

Fig. 9 is a sectional view on the line 9—9 of Fig. 2.

Referring to the drawings by characters of reference, the gun mount consists generally of a cradle A carried by a frame B which is secured to a support C that forms part of the armored body of a vehicle.

The frame B (Fig. 5) is a substantially rectangular member, preferably formed of two substantially similar but opposite parts which are secured to the support C by means of bolts 5. The side rails 6—6 of the frame have parallel inside faces 6a while the top rail 7 and bottom rail 8 have complementary curved inner faces 7a and 8a. The cradle A includes a shield 9, (Figs. 3 and 4) which is disposed in the opening of the frame and has curved outer faces 10a and 11a at its top 10 and bottom 11 to establish a close fit with the curved inner faces of the frame.

The shield is provided with a pair of laterally projecting trunnions 12—12 each of which is inserted in a half bearing 13 in the rear face of the side rails 6 of the frame. One trunnion is confined by a cap 14 fixed in place while the other trunnion is confined by a cap 15 (Figs. 1 and 8) whose lower end is mounted on a pivot pin 16. A bent lever 17 mounted on a pivot pin 18 above the free end of the cap 15 has a contact face 19 for engaging a similar face 20 on the free end of the cap 15 and is capable of exerting a pressure thereon to cause the cap to act as a brake for the trunnion.

The lower end of the lever is bifurcated to embrace a swing bolt 21 which is mounted on a pivot pin 22 below the cap 15. A plunger 23 slidable on the bolt is held against the outer face of the lever by means of a spring 24 which is seated on a thumb nut 25 threaded on the free end of the bolt 21. The position of the thumb nut controls the loading of the spring and the pressure exerted on the lever and by the lever on the cap 15. The swing bolt is moved away from the lever by relieving the load on the spring.

A shelf 26 fixed on the lower part of the shield 9 has an opening 27 for receiving a pintle 28 which is rotatable in a bushing 29 and is held against axial displacement by a known type of latch 30. On the upper end of the pintle is a yoke 31 for pivotally mounting a gun D through a pin 32.

A pair of rearwardly diverging bars 33—33 are fixed to the opposite sides of the shelf 26 and are connected transversely by a pair of arcuate bars 34 and 35 which are positioned at different distances from the yoke and are adapted to slidably carry an elevating mechanism 36 which supports the rear end of the gun. For example, when a short gun of .30 caliber is to be mounted, the elevating mechanism is placed on the forward bar 34 and when a longer gun of .50 caliber is to be mounted, the elevating mechanism is placed on the rear bar 35.

An arm 37 projecting laterally from the shelf 26 has an upstanding hook 38 which loosely engages a trunnion 39 on a cylinder 40 forming part of a standard equilibrator. A spring 41 embracing the upper portion of the cylinder 40 is confined between a ring 42 fixed on the upper end of the cylinder 40 and the lower end of a short outer cylinder 43. A rod 44 pivotally attached to the support C passes through the cover 45 fixed on the cylinder 43 and into the cylinder 40. A spring 46 embracing the rod is confined

between the cover 45 and a seat 47 on the lower end of the rod.

The shield 9 is provided with an opening 48 for a telescope (not shown) and with an opening 49 for the barrel 50 of the gun and the openings are of sufficient size to permit horizontal and vertical movement of the barrel and the attached telescope. When it is desired to elevate the gun beyond the limit permitted by the opening 48, the entire cradle A is moved about its trunnions 12 and may be held in position of adjustment through the pressure exerted by the lever 17.

When the lever 17 is not employed to hold the cradle, as in moving the cradle or in firing while it is free, the equilibrator serves to support the unbalanced weight of the cradle, gun, and ammunition container 51. The equilibrator acts first through the spring 41 and when it is compressed, the spring 46 comes into play.

I claim:

1. In a gun mount, a supporting wall, a rectangular frame secured to the wall and having sides with inner parallel faces and a top and bottom with inner cylindrical faces, a shield disposed in the frame and having outside faces complementary to the inner faces of the frame, horizontally disposed trunnions on the shield and mounted in the frame whereby the shield is movable in elevation, a shelf on the lower part of the shield, a pintle mounted in the shelf for movement in azimuth, and a pin for mounting a gun on the pintle for movement in elevation.

2. In a gun mount, a support having aligned half-bearings, a gun carrying-member having trunnions inserted in the half-bearings, retaining caps for the trunnions, one of said caps pivotally mounted on the support at one side of a half bearing, a lever pivotally mounted on the support at the opposite side of said half-bearing and beyond the free end of the pivoted cap, said lever when moved across the pivoted cap engaging the free end of the cap, a swing bolt pivotally mounted on the support adjacent the pivoted end of the pivoted cap, and a plunger carried by the swing bolt for engaging the free end of the lever to retain and exert pressure on the lever when said lever is in engagement with the pivoted cap.

ROBERT JAMES LENNON.