

Nov. 9, 1943.

J. C. TROTTER

2,334,152

MACHINE GUN SUPPORTING DEVICE

Filed May 13, 1940

3 Sheets-Sheet 1

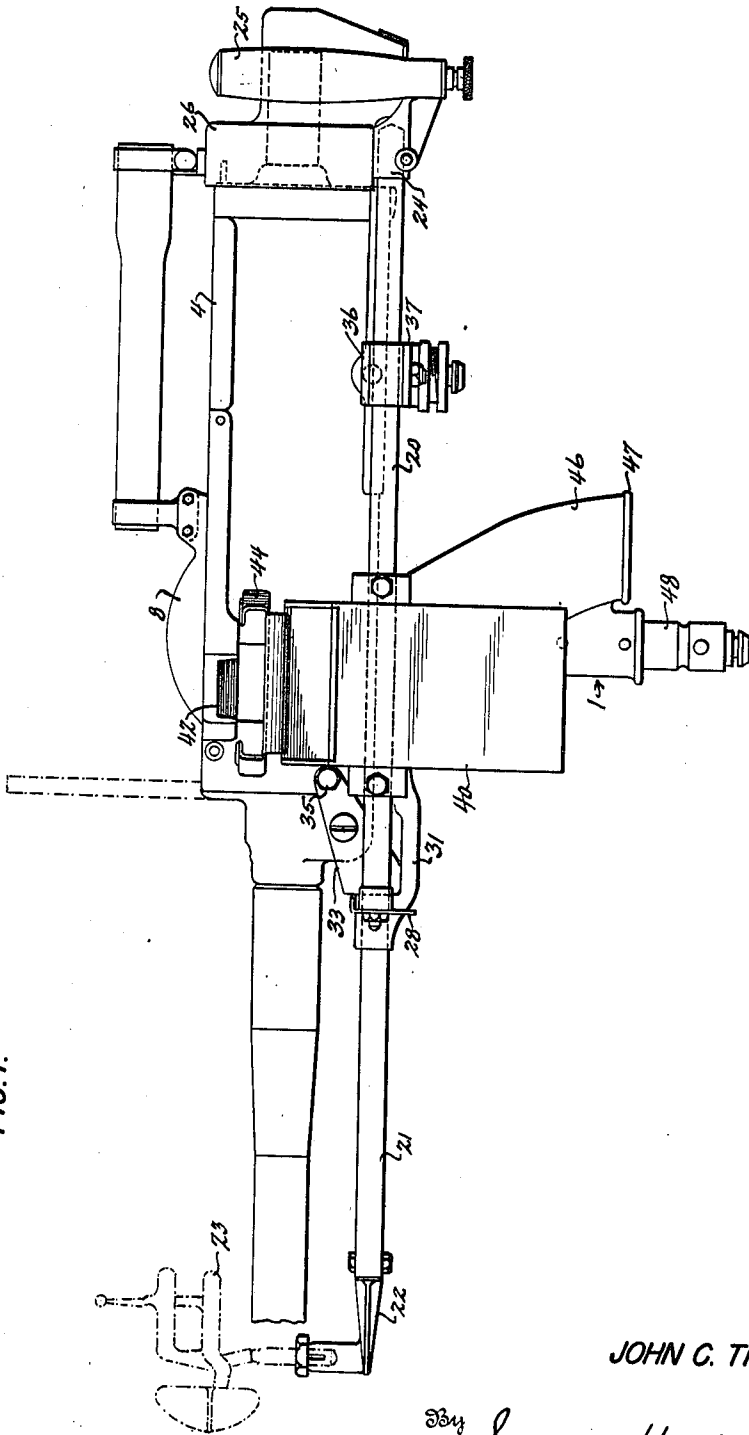


FIG. 1.

Inventor

JOHN C. TROTTER

334 Semmes, Keegin & Semmes
Attorneys

Nov. 9, 1943.

J. C. TROTTER

2,334,152

MACHINE GUN SUPPORTING DEVICE

Filed May 13, 1940

3 Sheets-Sheet 2

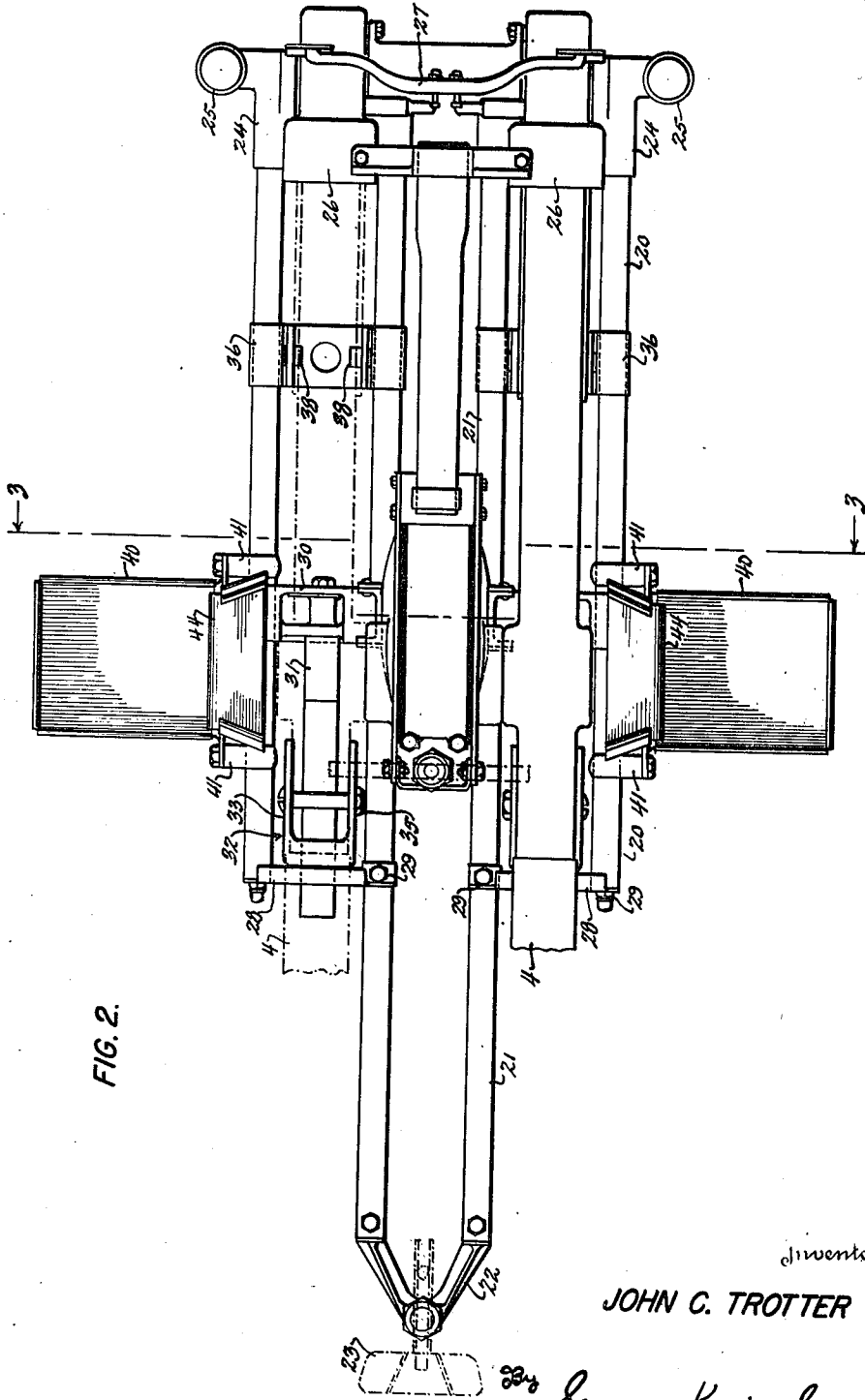


FIG. 2.

Inventor
JOHN C. TROTTER

Semmes, Keegin & Semmes
Attorneys

Nov. 9, 1943.

J. C. TROTTER

2,334,152

MACHINE GUN SUPPORTING DEVICE

Filed May 13, 1940

3 Sheets-Sheet 3

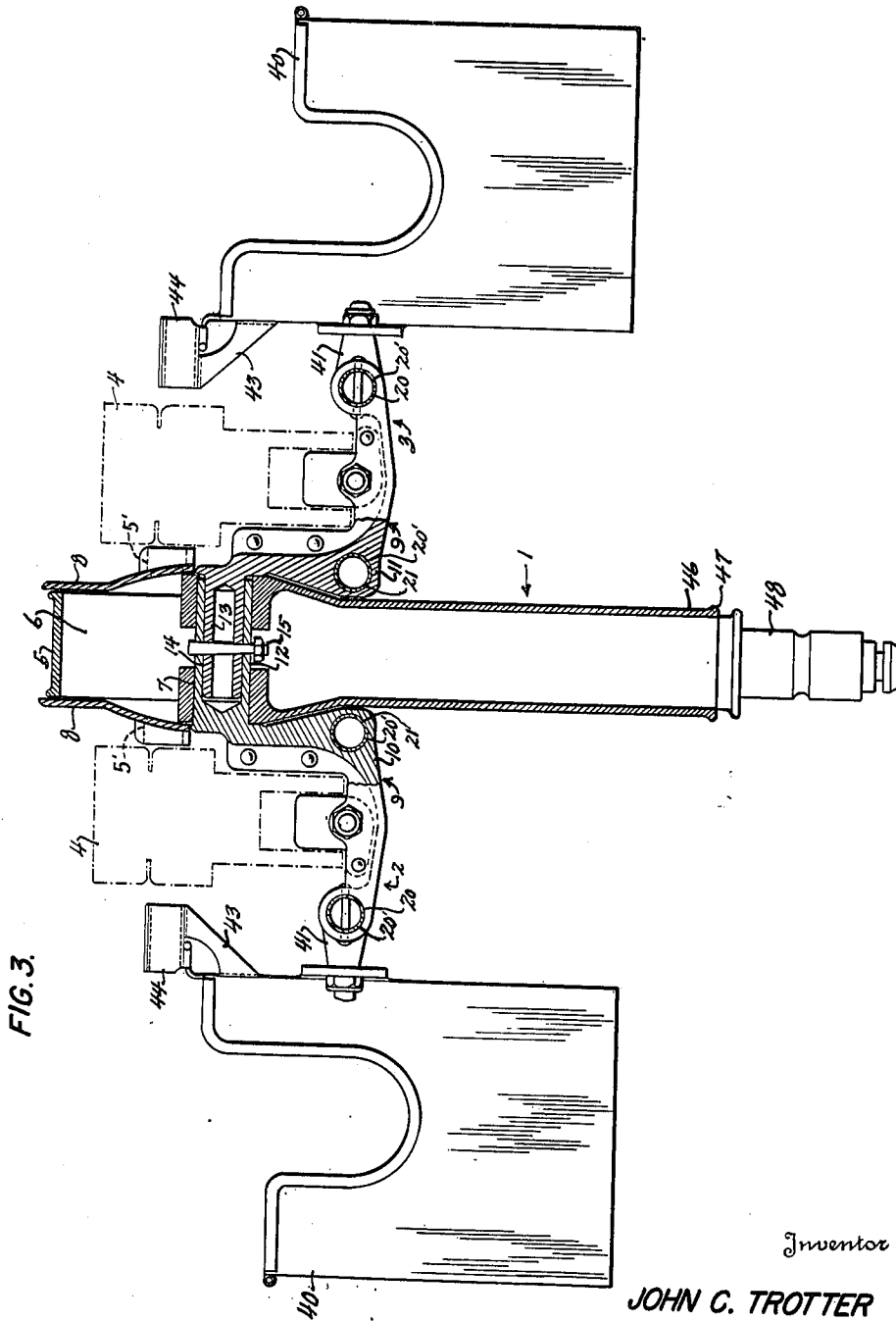


FIG. 3.

Inventor

JOHN C. TROTTER

334 Semmes, Keegin & Semmes
Attorneys

UNITED STATES PATENT OFFICE

2,334,152

MACHINE GUN SUPPORTING DEVICE

John C. Trotter, Buffalo, N. Y., assignor to Bell Aircraft Corporation, Buffalo, N. Y., a corporation of New York

Application May 13, 1940, Serial No. 334,932

7 Claims. (Cl. 89—37)

My invention relates to supporting devices and more particularly has reference to a supporting device for machine guns, the device being provided with means for attaching thereto the ammunition boxes and additional means for permitting the ammunition belt to feed into the feed block of the gun.

Heretofore no practical means for attaching the ammunition box to the machine gun or to the machine gun support has been proposed. Of course it will be readily appreciated that by mounting the ammunition box directly to the gun materially increases the weight of the gun and detracts from the aiming of the gun. Also, as far as I am aware, the majority of the ammunition boxes move with the gun, and being offset from the center line of the mounting device for the gun induces a vibration in the mount.

One object of this invention is to overcome the disadvantages now present in the art.

Another object is to provide an ammunition box for feeding the cartridges into the machine gun.

Yet another object of this invention is to provide a light weight cradle for supporting machine guns to be used in confined spaces, such as airplanes, the light weight cradles having attached thereto the ammunition boxes.

A still further object of this invention is to provide a stationary ammunition box for machine guns which is provided with means for enabling the cartridge belt to feed into the gun when the feed block thereof is not necessarily on the center line of the ammunition box.

An additional object is to provide a construction of the type described which can be cheaply and easily manufactured and which consists of a few main working parts.

To achieve the above and other objects, the invention in its broadest concept comprises a pair of light weight cradles which support twin machine guns. The cradles are carried by a hollow support that is swiveled in the fuselage of the airplane. The support is so formed as to afford a chute which will permit the cartridge links ejected from the gun to fall therein and be deposited in a suitable receptacle.

The cradles are carried by a saddle which is rotatably journaled in the support so that the gun may be fired upwardly or downwardly. An ammunition box is attached to the cradle at a point adjacent to the feed block of the gun and carries a guiding member that will enable the ammunition belt to feed into the gun even

though the feed block of the gun is not on the center line of the ammunition box.

In the drawings:

Figure 1 is a side elevational view showing one of a pair of machine guns mounted on my novel structure.

Figure 2 is a top plan view of the construction shown in Figure 1.

Figure 3 is a sectional view taken along the line 3—3 of Figure 2 looking in the direction of the arrows.

Referring to the drawings, and more particularly to Figures 1 and 3, I have shown a vertical support member 1 provided at its upper end with a pair of cradles 2 and 3 each of which supports a machine gun 4. The support 1 includes a hollow drum 5 which is formed with a cutaway portion 6 at its upper end. A bore 7 is formed in the drum 5 and plates 8 are positioned on opposite sides of the drum thereby closing the cutaway portion. A saddle 9 by which the cradles 2 and 3 are attached to the support 1 is provided. In Figure 3, it will be noted that the saddle 9 includes two parts 10 and 11 each of which is disposed on opposite sides of the support. The member 10 has integrally formed therewith a horizontal portion 12 which is of such diameter as to rotate freely in the bore 7. The part 11 is formed with a horizontal portion 13 which fits snugly within a bore 14 formed in the member 10. A locking pin 15 projects through aligned apertures in the members 12 and 13 for holding these parts in proper position.

By virtue of the above-described saddle, it will be appreciated that the member 9 can be swung through an arc above and below the horizontal plane which of course will enable the machine guns to have flexibility of operation.

In Figures 2 and 3, it will be seen that the cradles 2 and 3 comprise the following elements, and in view of the fact that each cradle is identical in construction and operation I will limit the description to the cradle 2. The cradle comprises a pair of parallel tubes 20 and 21, and it can be seen that the tube 21 is considerably longer than the tube 20. As shown in Figure 3, the tubes 20 and 21 extend through bores 20' formed in the saddle 9. As a consequence, the cradles 2 and 3 are attached to the support 1 by means of the saddle and can be moved in a vertical plane. At the outer end of the tube 21 and its corresponding member for the cradle 3 is attached a bracket 22 to which is removably affixed a gun sight 23. The rearward ends of

the tubes 20 and 21 are closed by means of a bracket 24 to which is suitably attached an operating handle 25. Of course each gun 4 has a usual back plate construction which I designate generally 26. A firing trigger 27 is also suitably associated with the rear portion of the assembly.

The forward end of the tube 20 is closed by means of a bracket 28 which extends transversely of the tubes 20 and 21 and is attached to each tube as shown at 29. Positioned between the tubes 20 and 21 and suitably attached to the front bracket 28 and a rear bracket 30 is a recoil compensating device 31. The recoil compensating device 31 is the subject of my co-pending application, Serial No. 336,286, filed May 20, 1940.

Each machine gun 4 is attached to its respective cradle in the following way. A bracket 32 is attached at its front end to the transversely extending member 28 and its arms 33 are secured to the forward portion of the gun casing as shown at 35. As best shown in Figure 2, a slidable strap 36 having downturned ends 37 which fit over the tubes 20 and 21 is positioned between the support 1 and the operating handles 25. The strap 36 is provided with lugs 38 which fit into the machine gun casing. It will be appreciated therefore that by virtue of the bracket construction 32 and the strap 36 the machine gun 4 is mounted in the cradle 2 for forward and rearward movement upon the firing of the gun.

As hereinbefore pointed out, an important feature of this invention is the attaching of the ammunition box to the cradle. Referring to Figures 2 and 3, it can be seen that an ammunition box 40 is attached to the tube 20 by means of bolts 41. Each ammunition box is secured to the cradle at a point adjacent to the feed block of the gun, and this block is indicated by the numeral 42. Attached to the upper portion of the ammunition box by a bracket 43 is a guide member 44. Consequently the guide 44 will permit the ammunition belt to feed into the gun when the feed block 42 may not be on the center line of ammunition box 40. Thus the gun 4 can reciprocate slightly, the belt having a certain degree of flexibility to take up the difference between the center of feed and the center of the ammunition box.

Referring again to Figures 1 and 3, it can be seen that there is integrally formed with the member 5 and extending downwardly therefrom a chute 46 which is formed with an offset discharge mouth 47 to which can be attached a container (not shown) for collecting the links which are ejected by the gun into the drum 5 through slots 5'. Also, a spindle 48 is associated with the support 1 for insertion into a socket or the like in the fuselage of the airplane so that the cradles 2 and 3 and the gun 4 may have swiveling movement.

It will be readily appreciated from the above description that I have provided a novel construction for attaching an ammunition box to a supporting cradle for machine guns. The box can be easily removed from and attached to the cradle and is further provided with guiding means for feeding the ammunition belt into feed block of the gun even though the feed block is not on the center line of the ammunition box. The device is relatively simple in construction and operation and can of course be cheaply and easily manufactured.

While I have shown and described the preferred embodiment of my invention, I wish it to be understood that I do not confine myself to the

precise details of construction herein set forth by way of illustration, as it is apparent that many changes and variations may be made therein, by those skilled in the art, without departing from the spirit of the invention, or exceeding the scope of the appended claims.

I claim:

1. In a machine gun, a mounting device comprising a cradle in which the gun is adapted to be carried for fore and aft movement, a hollow support for mounting the cradle to have swiveling movement, an ammunition box removably attached to the cradle, guide means supported by the upper portion of the ammunition box to guide the cartridge belts into the feed block of the machine gun, and said support having means to admit the ejected links from the gun into the hollow support for collection.

2. In a machine gun, a mounting device comprising a cradle in which the gun is adapted to be carried for fore and aft movement, a hollow support for mounting the cradle to have swiveling movement, an ammunition box attached to the cradle, guide means supported on the upper portion of the ammunition box to guide the cartridge belts into the feed block of the machine gun, means comprising a collection point associated with said support into which the links ejected by the gun are fed, and means to remove the links from said collection point.

3. In a machine gun provided with a feed block, a mounting device comprising a cradle in which the gun is adapted to be mounted for fore and aft movement, a hollow support for mounting the cradle to have swiveling movement, an ammunition box attached to the cradle adjacent to the feed block of the gun, guide means mounted on the upper portion of the ammunition box to guide the cartridge belts into the feed block of the machine gun, means associated with the support into which the links ejected by the gun are fed and a chute communicating with said means and attached to the support, said chute being adapted to remove the links from said collection point.

4. In a mounting construction for machine guns, a hollow support, a bore therein, a saddle rotatably mounted in the bore, the saddle comprising a hollow horizontal member journaled in the bore and an L-shaped portion integrally formed therewith, and a cradle in which the machine gun is mounted adapted to be supported by said L-shaped portion.

5. In a mounting construction for machine guns, a hollow support, a bore therein, a saddle rotatably mounted in the bore, the saddle comprising a hollow horizontal member journaled in the bore and an L-shaped portion integrally formed therewith, a second horizontal member fitted within the first mentioned horizontal member and having an L-shaped portion integrally formed therewith, means to lock said horizontal members together, and a cradle adapted to support a machine gun carried by each of said L-shaped portions.

6. In a gun assembly provided with twin machine guns having feed blocks, a mounting device comprising a vertical support, cradles adapted for carrying the machine guns attached to the support on opposite sides thereof, means to mount the machine guns for forward and rearward movement in each cradle during firing of the gun, an ammunition box removably secured to each cradle adjacent to the feed block of each machine gun, and guide means on the upper portion of

each ammunition box to guide the ammunition belts into the feed block of each gun.

7. In a gun assembly provided with twin machine guns having feed blocks, a mounting device comprising a vertical support, cradles adapted for carrying the machine guns attached to the support on opposite sides thereof, means to mount the machine guns for forward and rearward movement in each cradle during firing of

the gun, an ammunition box removably secured to each cradle adjacent to the feed block of each machine gun, guide means on the upper portion of each ammunition box to guide the ammunition belts into the feed block of each gun, and slot means at the upper end of the support through which the cartridge links ejected from the machine guns are adapted to pass for collection.

JOHN C. TROTTER.