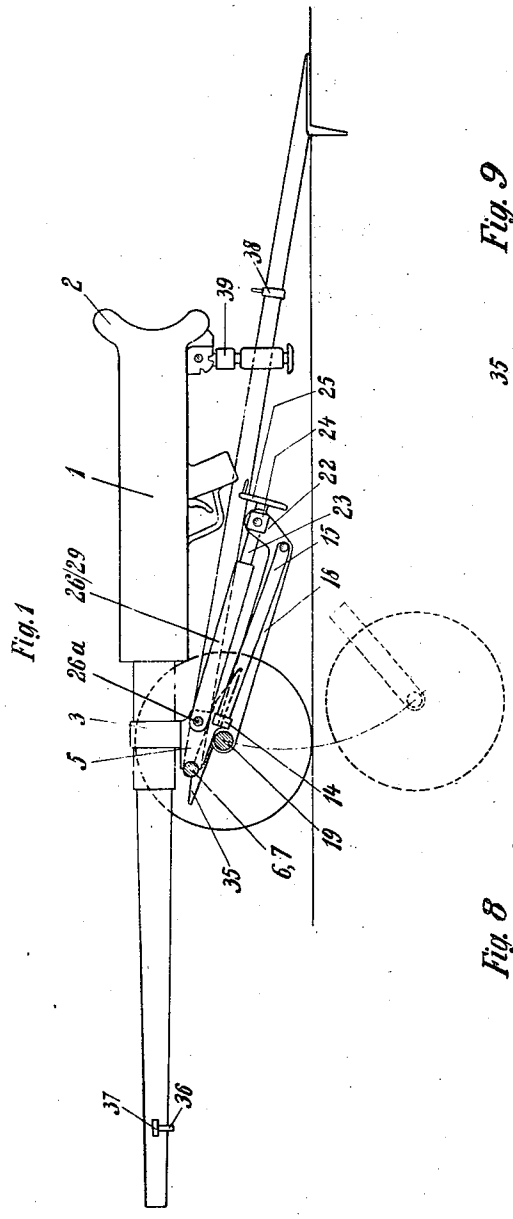
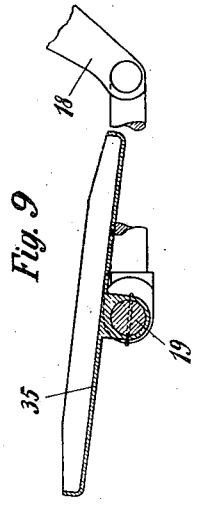
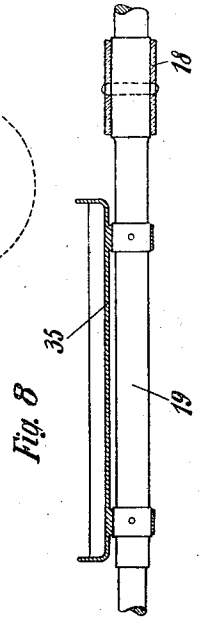
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GUN CARRIAGE

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GUN CARRIAGE

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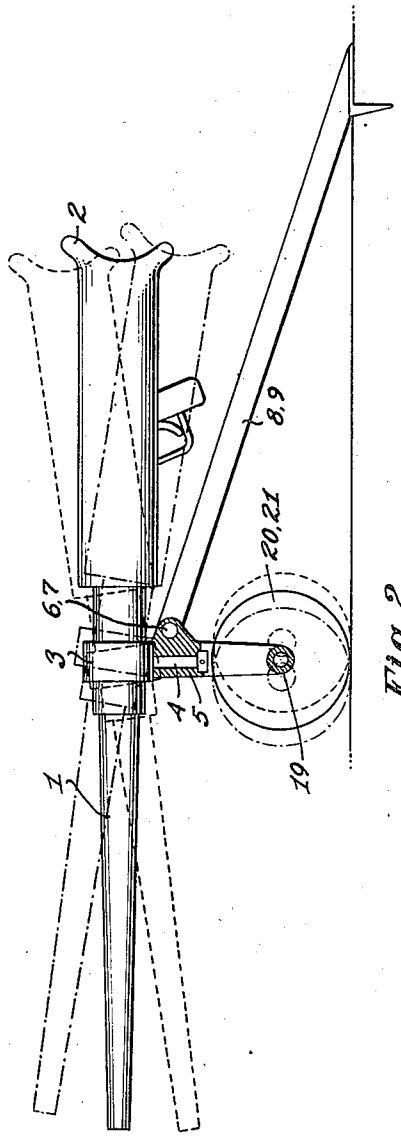


Fig. 2

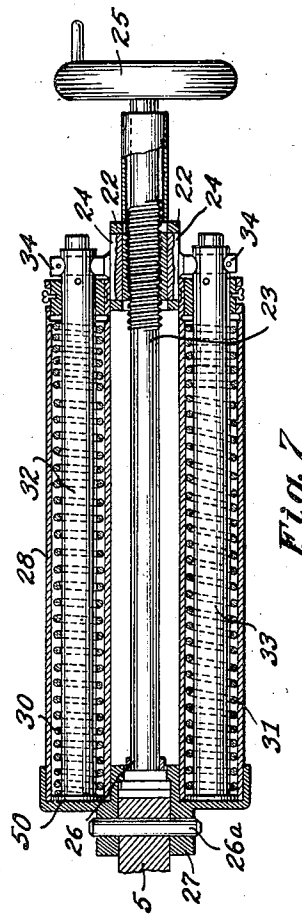


Fig. 7

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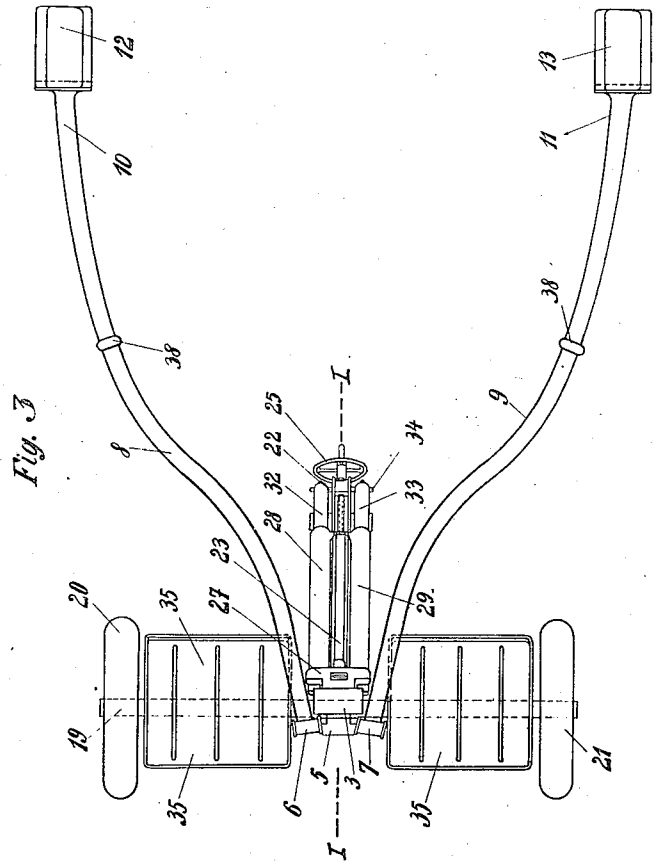
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GUN CARRIAGE

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Fig. 3



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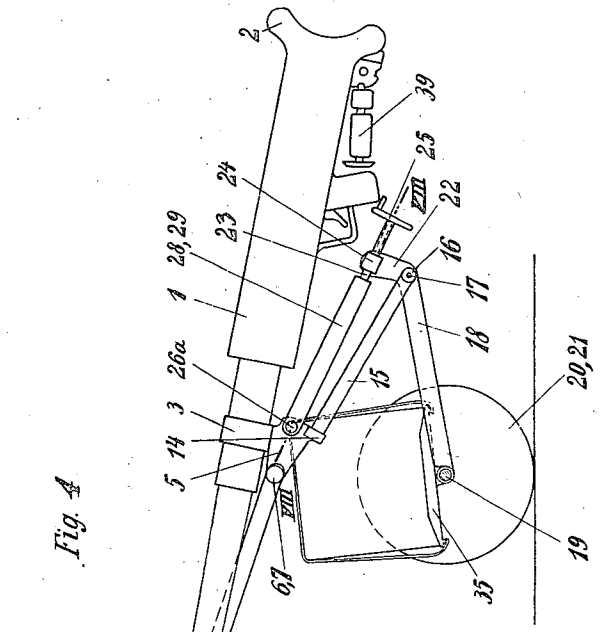


Fig. 4

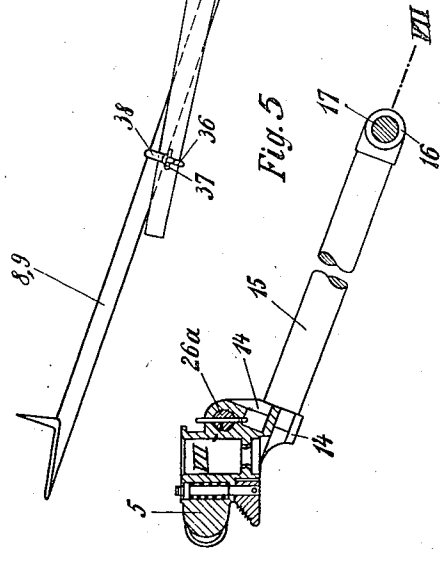


Fig. 5

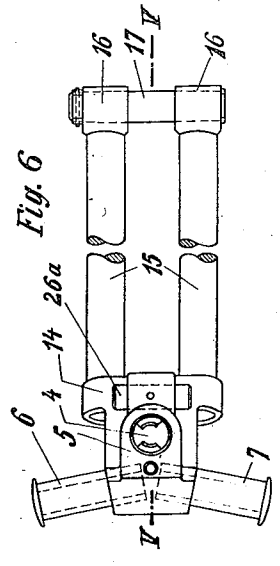


Fig. 6

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GUN CARRIAGE

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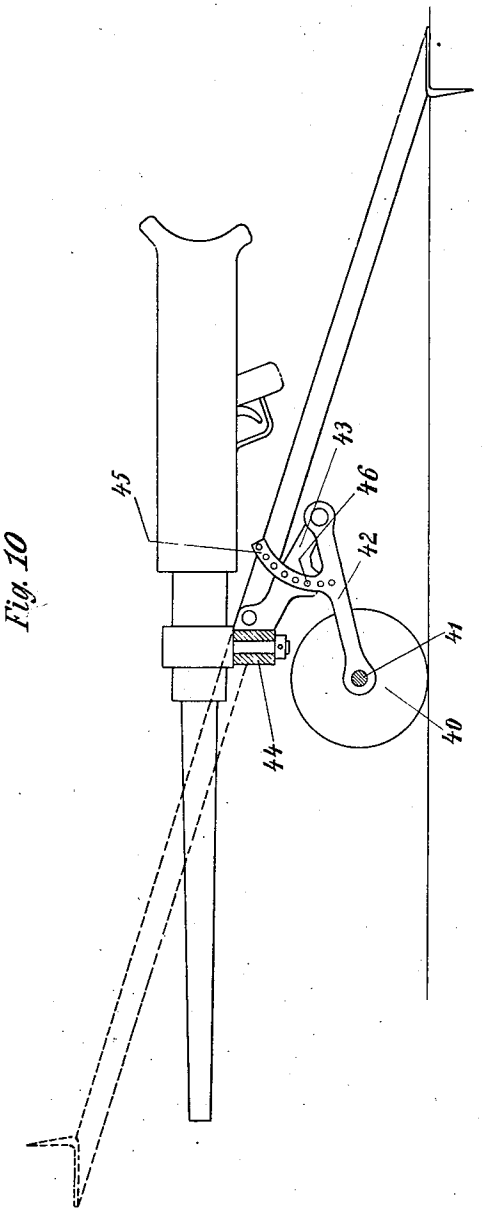


Fig. 10

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UNITED STATES PATENT OFFICE

2,376,849

GUN CARRIAGE

Wolfgang Rossmanith, Solothurn, Switzerland; vested in the Alien Property Custodian

Application September 23, 1940, Serial No. 357,976
In Germany June 7, 1939

1 Claim. (Cl. 89—40)

The invention relates to a carriage frame for automatic firearms, tank guns and similar low-firing firearms of large calibre to the held against the shoulder but having rather low firing height and utilizing the arrangement known from gun carriages mounted on wheels for machine guns, in which the firearm is mounted in a gun carriage body, carrying the set of wheels so that it can be moved for aiming in lateral direction. The invention has for its object to make it possible to fire from the carriage frame in laying, sitting or kneeling position without stress by recoil by simple means in wide lateral aiming field and to freely point the firearm by the shoulder.

On such firearms mounted on gun carriages, which have to be brought into position on the fighting field, if possible only by one man, easy capability of running, rapid readiness for firing and sufficient rigidity at firing are required. The frame for firing- and movement constructed according to the invention does not only fulfill these conditions but possesses further, owing to the shearlike turning of the upper part of its carriage relative to the set of wheels, an easy adjustability to different firing heights and further the possibility of rapid transformation from the state of moving into the state of readiness for shooting. The whole carriage frame is very light, simple and low and permits that the squatting, kneeling or laying firearm can easily charge, point and shoot. With greatest firmness the possibility of most extensive oscillating in lateral direction is attained.

The firearm according to the invention oscillates, for upward pointing, together with the carriage and the set of wheels about the axles of the supporting legs hingedly mounted on the body of the gun carriage.

Other details of the invention will be disclosed by the following specification and the drawings which show two embodiments of the invention of a shoulder firearm for defence against tanks.

Figs. 1 to 10 show the first form of construction with height adjustment by means of handwheel and screw spindle.

Fig. 1 is a part section on line I—I of Fig. 3 at the lowest firing height of a firearm.

Fig. 2 is a side view diagrammatically the height pointing of the firearm by oscillating the whole carriage about the hinge axles of the supporting legs. In this case the supporting legs are mounted at the rear end of the carriage.

Fig. 3 is a top plan view of the firing frame and carriage in the firing position.

Fig. 4 is a side elevation showing the firing- and carriage frame ready for running.

Fig. 5 is a section on line V—V of Fig. 6 and

Fig. 6 in top plan view of the out-riggers and their connection with the body of the gun carriage.

Fig. 7 is a longitudinal section through the equalization cylinders on line VII—VII of Fig. 5.

Figs. 8 and 9 are different sectional views showing the arrangement of the magazine box plates on the wheel axle.

Fig. 10 is a side view showing diagrammatically a modification of the firing- and carriage frame with height adjusting by insertable plug and perforated curved bar.

In the form of construction illustrated in Figs. 1 to 9 the tank gun 1 which has at the rear end a butt 2 to be placed in the shoulder is mounted, by means of a lunette-ring 3 and of a pivot 4 fixed on the same, in a carriage body 5, so that it can be freely oscillated in lateral directions. The carriage body 5 has at the front end and at both sides of the lunette-ring 3 obliquely directed pins 6 and 7 on which supporting legs 8 and 9 are hingedly mounted. These supporting legs are curved in S shape and spread out to an extent that, with greatest firmness of the firearm the gunner can easily sit between them, and they end at the rear in straight arms 10 and 11 having spur shoes 12 and 13. The carriage body 5 has on the lower side at the rear an extension 14 similar to spectacles in which two outriggers 15 are fixed after the manner of a fork, as shown in Figs. 5 and 6. A pin 17, mounted between the two outriggers in the hinge heads 16, forms the fulcrum for an oscillatable lever carrying the set of wheels. This oscillatable lever, as shown in Fig. 4, consists of a longer arm 18 which, for raising the firing position of the firearm swings downwardly and carries at its lower end a continuous wheel axle 19 with wheels 20 and 21, and of a shorter fork-shaped lever arm 22 in the eyes of which a sleeve 24 is rotatably mounted as a nut for a hand spindle 23, as shown in Figs. 1 and 7. The hand spindle 23 has on its rear end a hand wheel 25 and its front end 26 is fixed in a holding plate 27 hinged by means of a pin 26a on the carriage body 5. The holding plate 27 has, as shown in Fig. 7 at either side of the hand spindle 23 a cylinder 28 or 29 for balancing the weight to facilitate the adjustment by the hand spindle gear 23, 24. As shown in Fig. 8, the equalizing cylinders contain piston rods 32, 33 which are surrounded by buffer springs 30, 31 and are hingedly mounted on either side of the cylinder by pins 34 on the fork-shaped

lever 22. The inner ends of the piston rods 32, 33 are formed with shoulders 50 against which the springs 30, 31 abut.

The wheel axle 19 carries on either side fixed plates 35, on which during the transport the magazine boxes are held by means of belts as shown in Figs. 8 and 9.

The barrel of the tank gun has at the front end on either side a ring 36 with a hook 37, on either side, open in upward direction. These open hooks are adapted to hold by means of the rings 38 the supporting legs 8 and 9 when these are folded forward to form a fork-shaped carriage shaft.

The tank gun 1 itself may preferably be supported during the firing by a butt support 39 adjustable as regards length and which during the running is folded up and securely held on the firearm.

The pointing in lateral direction is effected by the shoulder of the gunner by turning the gun 1 about the pivot 4. The pointing in upward direction is effected by turning the swing lever 18, 22 about its horizontal axle 17 by actuating the hand spindle 23, 24 so that the whole mechanism carries out an oscillating movement about the hinge pins 6, 7 of the supporting legs 8, 9 as shown in Fig. 2.

In Fig. 10 the wheel axle 41 carrying the wheels 40 is connected like a toggle lever by a lever 42 with the rear end of the carriage 44 and can be secured on this body at different angular positions by means of a notched curved bar 45 and an insertable pin 46.

I claim:

The combination of a gun carriage, a gun mounted to rotate thereon in an approximately horizontal plane, supporting legs pivotally connected with said carriage and extending rearwardly thereof, a pair of outriggers rigidly secured to said carriage and extending rearwardly thereof, a bell crank lever, having a forwardly extending long arm and a short arm, said lever being pivoted between the arms to the outer ends of said outriggers, carriage wheels mounted on the forward end of said long arm, a casing and piston, one pivotally connected with the carriage and the other pivotally connected with the outer end of the short arm, a spring in said casing tending to move said piston into said cylinder, and hand operated screw means pivotally connected to said carriage and the outer end of said short arm for adjusting the distance between said carriage and arm whereby said wheels are raised or lowered and said gun is turned in a vertical plane about the pivots of said supporting legs.

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