E. SCHNEIDER.

WHEELED GUN CARRIAGE.

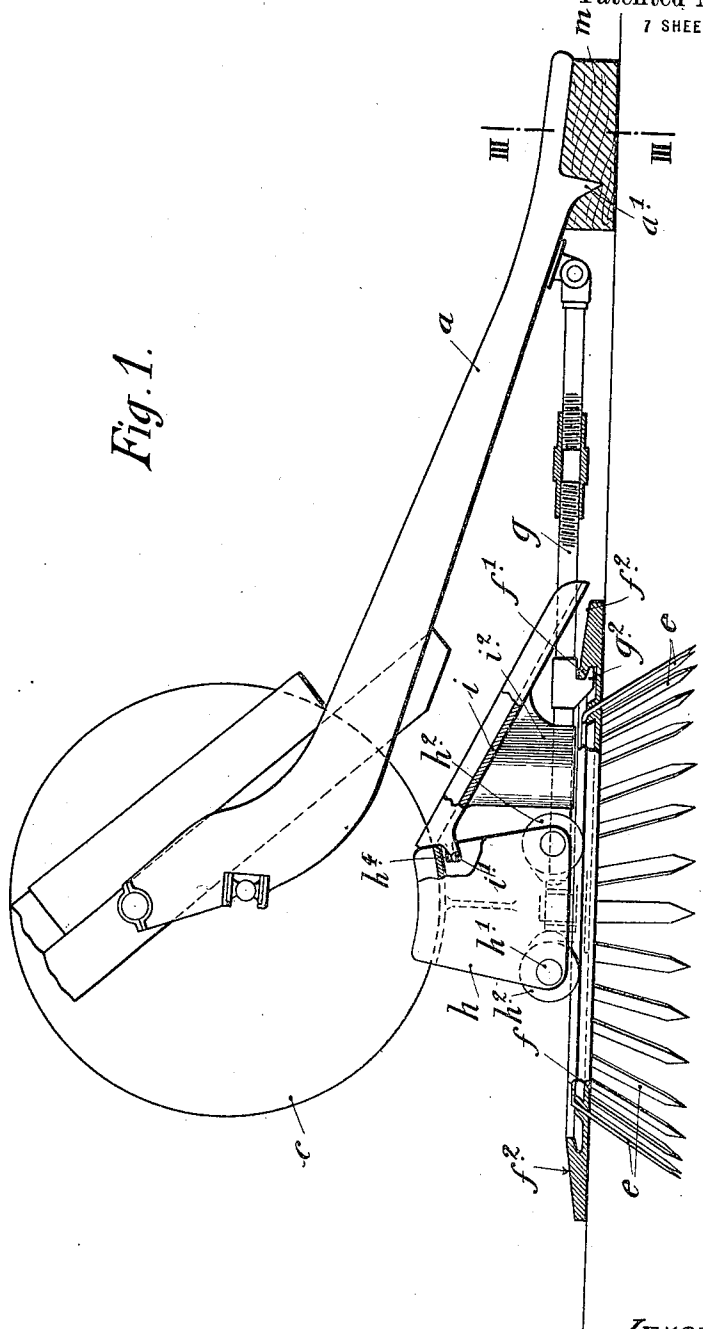
APPLICATION FILED AUG. 21, 1918.

1,332,762.

Patented Mar. 2, 1920.

7 SHEETS—SHEET 1.

Fig. 1.



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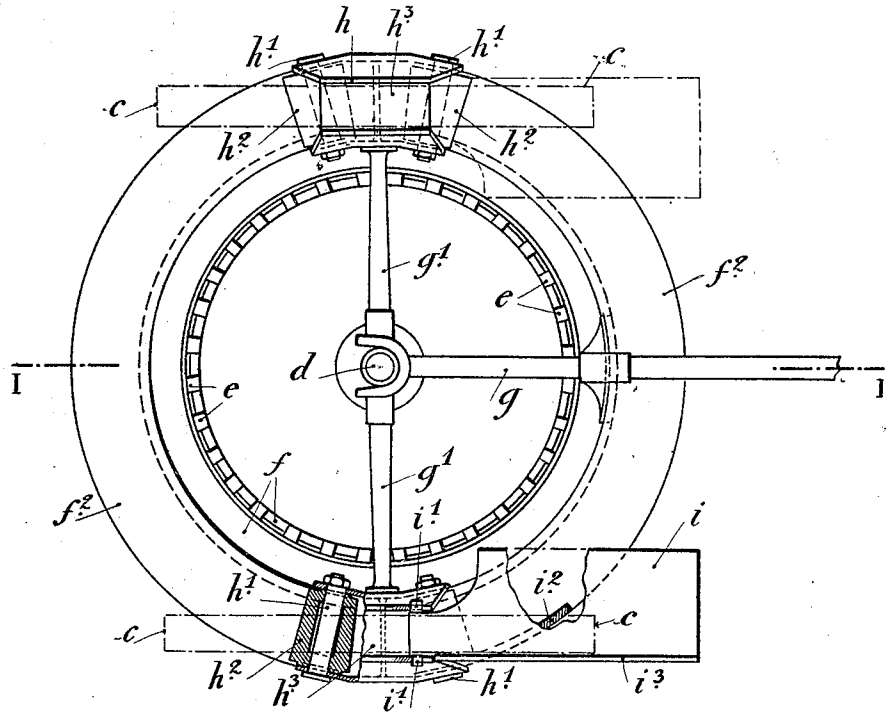
7 SHEETS—SHEET 2.

Fig. 2.



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7 SHEETS—SHEET 3.

Fig. 3

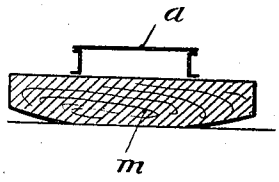
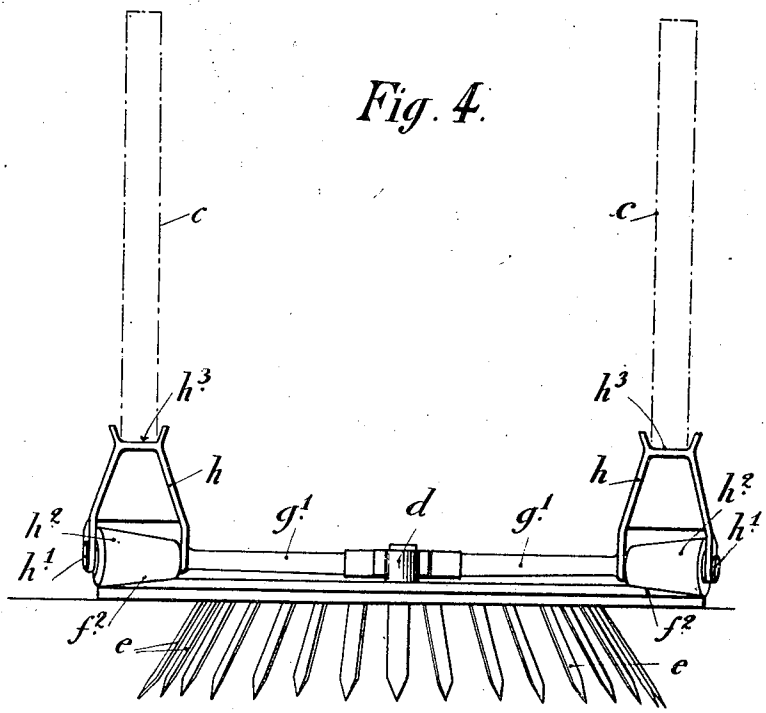


Fig. 4.



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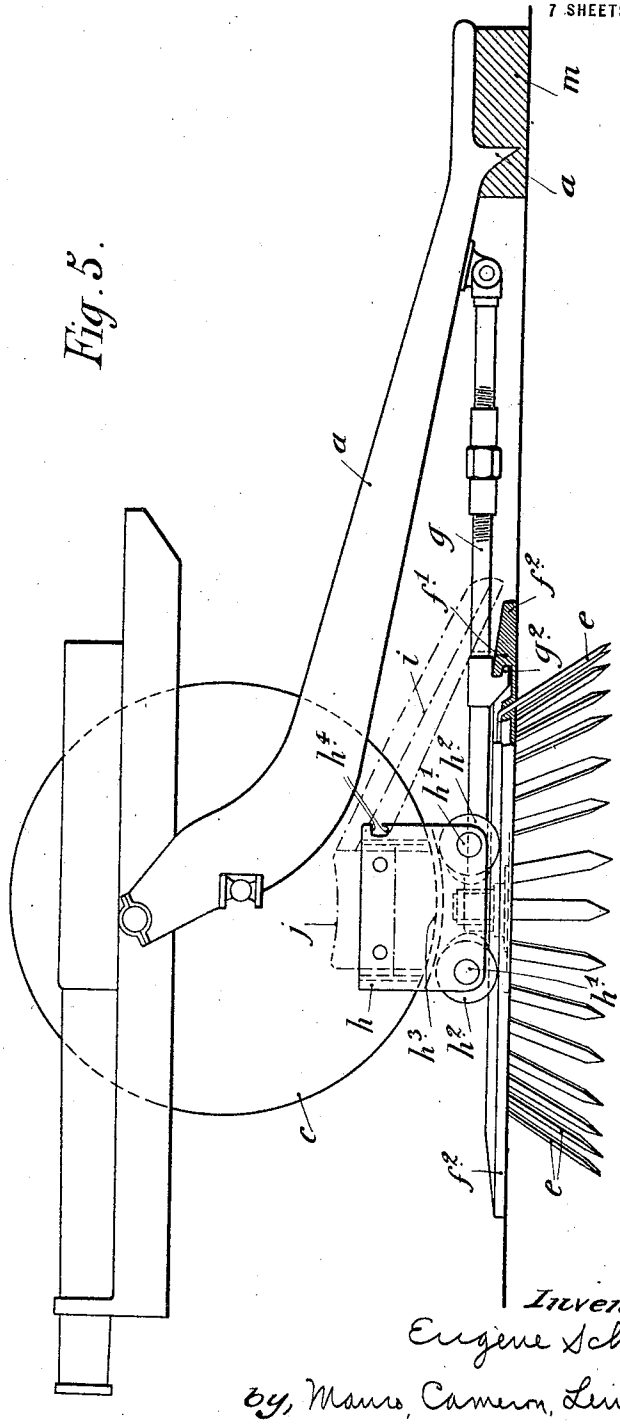
7 SHEETS—SHEET 4.

Fig. 5.



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7 SHEETS—SHEET 5.

Fig. 6.

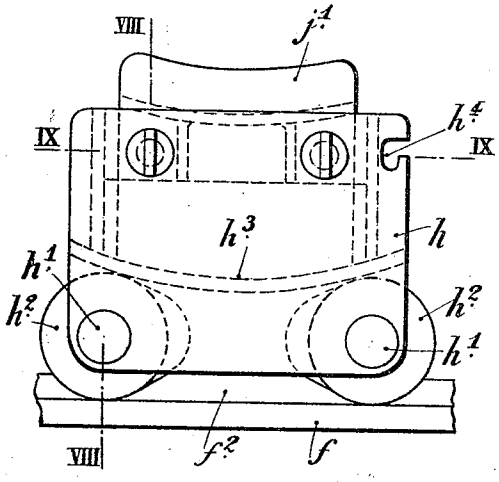


Fig. 8.

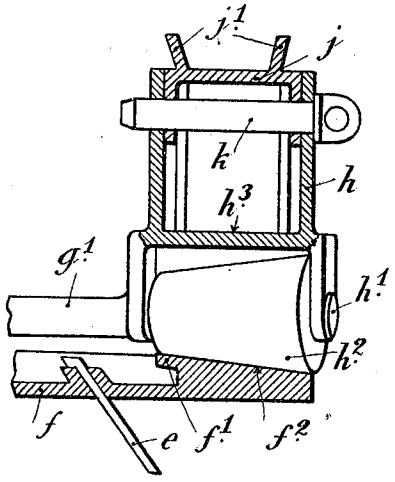


Fig. 7.

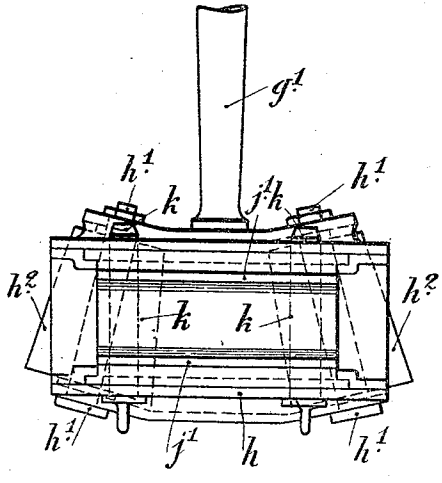
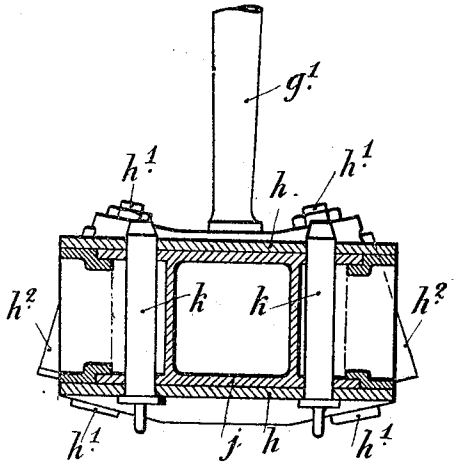


Fig. 9.



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7 SHEETS—SHEET 6.

Fig. 10.

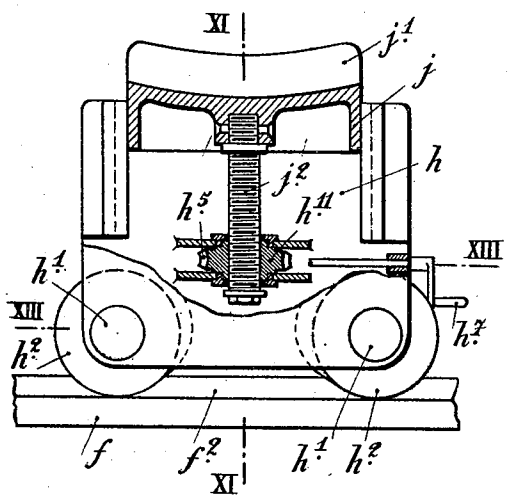


Fig. 11.

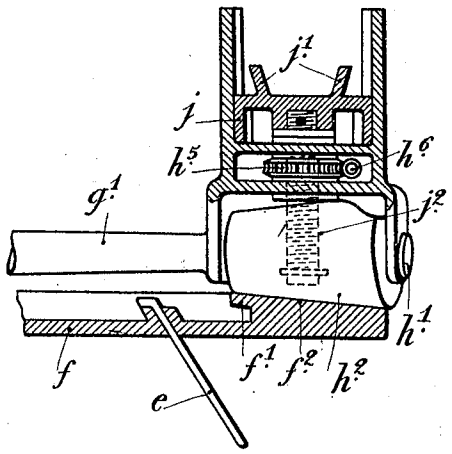


Fig. 13.

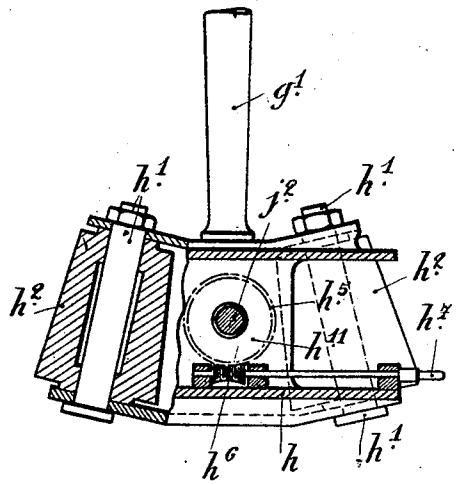
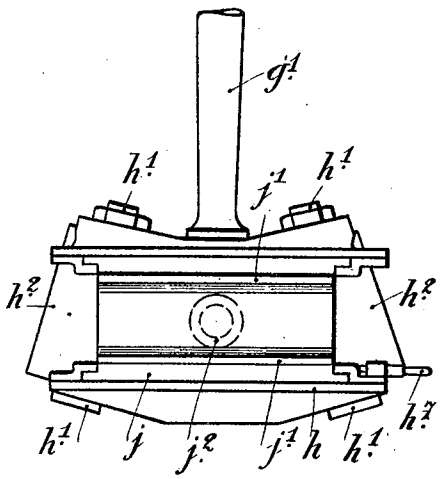


Fig. 12.



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7 SHEETS—SHEET 7.

Fig. 15.

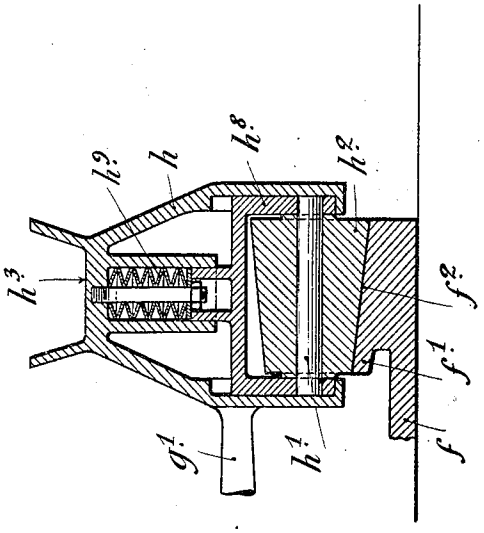
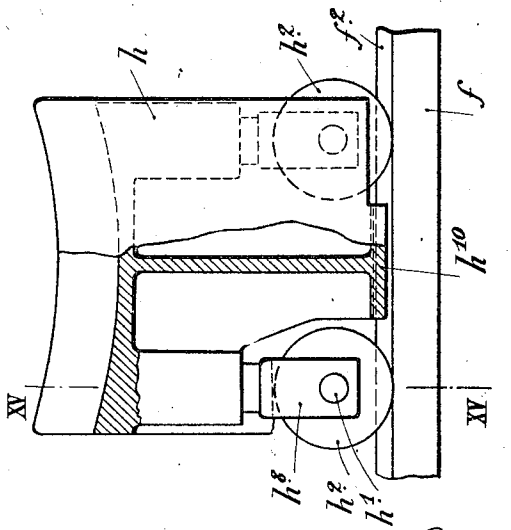


Fig. 14.



Inventor.

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UNITED STATES PATENT OFFICE.

EUGÈNE SCHNEIDER, OF PARIS, FRANCE, ASSIGNOR TO SCHNEIDER & CIE., OF PARIS, FRANCE, A LIMITED JOINT-STOCK COMPANY OF FRANCE.

WHEELED GUN-CARRIAGE.

1,332,762. Specification of Letters Patent. Patented Mar. 2, 1920.

Application filed August 21, 1918. Serial No. 250,859.

To all whom it may concern:

Be it known that I, EUGÈNE SCHNEIDER, a citizen of the French Republic, and a resident of 42 Rue d'Anjou, Paris, France, have invented a new and useful Improvement in Wheeled Gun-Carriages, which invention is fully set forth in the following specification.

This invention has for its object to provide an improved wheeled gun carriage having an anchoring device comprising a central pivot, of the type described in the specification of addition No. 18,621 of April 5, 1913, to French Patent No. 465,901 of February 17, 1913.

The invention is capable of receiving a variety of mechanical expressions, three of which are shown on the accompanying drawings, but it is to be expressly understood that the drawings are for purposes of illustration only and are not to be construed as a definition of the limits of the invention, reference being had to the appended claims for that purpose.

The various embodiments of the present invention are illustrated on the accompanying drawings in which:

Figure 1 is a side elevation wherein some parts of the platform are shown in section on the line I—I of Fig. 2.

Fig. 2 is a plan corresponding to Fig. 1 after removal of the gun carriage.

Fig. 3 is a cross section on the line III—III of Fig. 1.

Fig. 4 is an end elevation of the platform.

Fig. 5 is a side elevation of a first modification of the practical construction shown in Figs. 1 to 4.

Fig. 6 is an elevation of a detail.

Fig. 7 is a corresponding plan.

Figs. 8 and 9 are sections on line VIII—VIII and IX—IX of Fig. 6.

Figs. 10 to 13 illustrate a detail of a second modification.

Fig. 10 is an elevation partly in section.

Fig. 11 is a section on the line XI—XI of Fig. 10, the parts being shown in a different position.

Fig. 12 is a corresponding plan.

Fig. 13 is a section on the line XIII—XIII of Fig. 10.

Figs. 14 and 15 are respectively a side elevation partly in section and a cross section on the line XV—XV of Fig. 14 of a construction wherein the saddles are mounted elastically.

The improved gun carriage comprises in the usual manner a circular platform f having on its upper face a projecting central pivot d. This platform is adapted to be anchored to the ground by means of a series of spades or stakes e driven into the ground through corresponding slots in the body part of the platform. The pivot d is engaged by the head of a strut g shown as hinged at its rear end to the trail a. The strut g has fixed thereto two arms g^1 projecting laterally from the head the strut and arms constituting a frame. The platform f is formed with an overhanging ledge or border f^1 engaged by a hook g^2 projecting from the underside of the strut g.

According to the present invention the arms g^1 which constitute a transverse strut and which are designed to maintain the wheels c of the gun carriage at a constant distance from the axis of the pivot d, are provided at their outer ends, while acting as supporting parts for maintaining the said distance, with saddles for supporting the wheeled axle in an elevated position.

In the example shown in Figs. 1 to 4, each of the saddles h carries axle-pins h^1 arranged along radii of the platform upon which axle-pins are mounted truncated conical rollers h^2. A roller track f^2 of corresponding conicity is formed for the said rollers around the periphery of the platform f. The saddles are formed at their upper parts with an elevated channel-shaped seat h^3 for the engagement and support of the wheel c of the gun carriage in an elevated position.

Raising the wheels c in any suitable way so as to cause them to rest in the seats or channels h^3, raises also the line of fire of the gun through an amount equal to the height of the saddles.

The anchoring spur a^1 of the carriage trail may be fixed in a block m upon which the underside of the trail can rest.

It is to be understood that the gun carriage, of which the line of fire has been elevated in the manner described, can be readily trained by causing the gun carriage as a whole to turn on the pivot d, while the

wheels remain in the saddles h the rollers h^2 of which will then travel around the roller track f^2.

The platform may be provided with inclined planes for facilitating the lifting of the wheels on to the saddles h. These inclined planes i may be made removable as shown in Figs. 1 and 2, and be adapted to engage by means of pins i^1 in notches h^4 in the saddles. They may comprise a part such as the curved foot i^2 which is adapted to bear upon the platform f in the position of use and are also preferably provided with an outer border i^3. The said inclined planes may be made, for a greater or smaller part of their extent, of sufficient width to enable them to serve as platforms for the gun servers.

In the modification shown in Figs. 5 to 9, each saddle is divided into two parts, the upper part j being removable and capable of being fixed to the lower part h, for instance by means of pins k. When the two parts are assembled, an elevated seat or channel j^1, formed on the upper part j, constitutes a support and lateral bearing for the wheels of the gun carriage for the purpose of firing at high angles. In order to return the wheels of the gun carriage quickly into the desired position for firing with a small inclination of the gun barrel, it is merely necessary to remove the saddle parts j and allow the carriage wheels to descend into the lower seat or channel h^3 formed by the lower part h as shown in Fig. 5.

In the modification shown in Figs. 10 to 13, the parts j and h are always connected together but may be relatively moved or separated to a varying extent. For this purpose, the part j is carried for instance on the upper end of a screw j^2 working in a nut h^{11} which is journaled in the lower part h. The part j may be raised or lowered by providing the nut h^{11} with helical teeth h^5 and actuating the same by means of a worm h^6 operable by a hand crank h^7. The screw j^2 and the saddle part j carried by it are prevented from rotating by guiding the said saddle part in the lower part h.

This last described construction of the saddles in the form of screwjacks affords at the same time both a simple means for lowering the wheels from a further elevated position into a less elevated position and a means for varying the elevation of the gun barrel independently of the usual elevating mechanism.

In the construction shown in Figs. 14 and 15, the saddles h are mounted elastically. Each of the axle-pins h^1 may in such a case be carried by a bearing h^8 guided in the body of the saddle h in such a manner as to allow of a limited relative displacement between the saddle part h and the said roller bearings. A spring h^9, composed for instance of a pile of Belleville washers, is interposed between the roller bearing and the saddle. The saddle is formed with a foot h^{10} that is kept normally out of contact with the roller track f^2. In firing, a slight depression of the saddle h, by compressing the springs h^9, will bring the feet h^{10} into contact with the roller track f^2 and thereby increase the area of the surface through which the strains will be transmitted to the platform. While the elastic mounting of the saddles is shown applied to the embodiment of the invention illustrated in Figs. 14 and 15, it is apparent that it may also be applied to other embodiments of this invention.

It is to be understood that the constructional details of the described embodiments may be varied at will. For instance, the inclined planes i may be clipped, hinged, hooked, or otherwise connected to the respective saddles in any suitable way. Likewise, in a case where the saddle is divided into two parts, these parts may be assembled by means other than those illustrated, and may be adjusted by any suitable means. Certain features of the invention are also capable of use without other features thereof. Reference is therefore to be had to the claims hereto appended for a definition of the limits of the invention.

What I claim and desire to secure by Letters Patent of the United States is:—

1. In combination with a wheeled gun carriage, a platform provided with a pivot, a strut mounted on said pivot and connected to said gun carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms having elevated seats for receiving the wheels of said carriage and supporting the same in elevated position, and a track with which said saddles coact.

2. In combination with a wheeled gun carriage, a platform provided with a pivot and a track concentric with said pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for receiving the wheels of said carriage and supporting the same in elevated position, and rollers on said saddles adapted to run on said track.

3. In combination with a wheeled gun carriage, a platform provided with a pivot and a conical track concentric with said pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for

receiving the wheels of said carriage and supporting the same in elevated position, and conical rollers on each of said saddles adapted to run on said track.

4. In combination with a wheeled gun carriage, a platform provided with a pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms having elevated seats for receiving the wheels of said carriage and supporting the same in elevated position, a track with which said saddles coact, detachable inclined planes mounted on said saddles to facilitate positioning said wheels on said saddles, and means for holding said inclined planes in place when mounted on the saddles.

5. In combination with a wheeled gun carriage, a platform provided with a pivot and a track concentric with said pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for receiving the wheels of said carriage and supporting the same in elevated position, rollers on said saddles adapted to run on said track, and inclined planes hinged to said saddles to facilitate positioning said wheels on said saddles.

6. In combination with a wheeled gun carriage, a platform provided with a pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms having elevated seats for receiving the wheels of said carriage and supporting the same in elevated position, detachable inclined planes mounted on said saddles to facilitate positioning said wheels on said saddles, said inclined planes being constructed to constitute platforms for the gun servers and means for holding said inclined planes in place on the saddles.

7. In combination with a wheeled gun carriage, a platform provided with a pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, and two-part saddles on said arms for receiving the wheels of said carriage and maintaining the same in position for firing at either high or low angles.

8. In combination with a wheeled gun carriage, a platform provided with a pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for receiving the wheels of said carriage, said saddles being constructed of separable parts whereby the carriage may be maintained in position for firing at either high or low angles, and means connecting said parts.

9. In combination with a wheeled gun carriage, a platform provided with a pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for receiving the wheels of said carriage, said saddles being constructed of relatively movable parts whereby the carriage may be maintained in position for firing at either high or low angles, and means for adjusting the relative position of said parts.

10. In combination with a wheeled gun carriage, a platform provided with a pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for receiving the wheels of said carriage, said saddles being constructed of relatively movable parts whereby the carriage may be maintained in position for firing at either high or low angles, and a screw and nut for raising and lowering the upper part of each saddle with respect to the lower part thereof.

11. In combination with a wheeled gun carriage, a platform provided with a pivot and a track concentric with said pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for receiving the wheels of said carriage and maintaining the same in elevated position, said saddles comprising relatively movable parts, rollers on the lower of said parts adapted to engage said track, and resilient means between the parts of said saddles.

12. In combination with a wheeled gun carriage, a platform provided with a pivot and a track concentric with said pivot, a strut mounted on said pivot and connected to said carriage, transverse arms on said strut for maintaining the wheels of said carriage at a constant distance from the axis of said pivot, saddles on said arms for receiving the wheels of said carriage and maintaining the same in elevated position, said saddles comprising relatively movable parts, rollers on the lower of said parts adapted to engage said track, resilient means between the parts of said saddles, and feet on the upper of said parts adapted to engage said track when said resilient means is compressed.

13. In combination with a wheeled gun carriage, a platform provided with a pivot, a frame rotatably mounted on said pivot and connected to said carriage, saddles on said frame having elevated seats for receiving the wheels of said carriage to maintain said wheels at a fixed distance from said pivot and support the same in elevated position, and a track with which said saddles coact.

14. In combination with a wheeled gun carriage, a platform provided with a pivot and a track concentric with said pivot, a frame rotatably mounted on said pivot and connected to said carriage, saddles on said frame for receiving the wheels of said carriage to maintain said wheels at a fixed distance from said pivot and support the same in an elevated position, and rollers on said saddles adapted to run on said track.

15. In combination with a wheeled gun carriage, a platform provided with a pivot, a frame rotatably mounted on said pivot and connected to said carriage, saddles on said frame for receiving the wheels of said carriage to maintain said wheels at a fixed distance from said pivot and support the same in an elevated position, and means whereby said saddles may support said wheels in a further elevated position.

16. In combination with a wheeled gun carriage, a platform provided with a pivot, a frame rotatably mounted on said pivot and connected to said carriage, saddles on said frame for receiving the wheels of said carriage to maintain said wheels at a fixed distance from said pivot and support the same in an elevated position, said saddles being constructed of relatively separable parts, and means to raise and lower the upper of said parts with respect to the lower of said parts.

17. In combination with a wheeled gun carriage, a platform provided with a pivot, a frame rotatably mounted on said pivot and connected to said carriage, saddles on said frame having elevated seats for receiving the wheels of said carriage to maintain said wheels at a fixed distance from said pivot and support the same in an elevated position, a track with which said saddles coact and inclined planes movably connected to said saddles.

18. In combination with a wheeled gun carriage, a platform provided with a pivot and a track concentric with said pivot, a frame rotatably mounted on said pivot and connected to said carriage, saddles on said frame for receiving the wheels of said carriage to maintain said wheels at a fixed distance from said pivot and support the same in an elevated position, said saddles comprising relatively movable parts, resilient means between said parts, and rollers on the lower of said parts adapted to run on said track.

In testimony whereof I have signed this specification.

EUGÈNE SCHNEIDER.

Witnesses:

ANDRÉ MOSTICKER,

JOHN F. SIMONS.