

E. SCHNEIDER.

GUN CARRIAGE.

APPLICATION FILED FEB. 14, 1913.

1,084,490.

Patented Jan. 13, 1914.

2 SHEETS—SHEET 1.

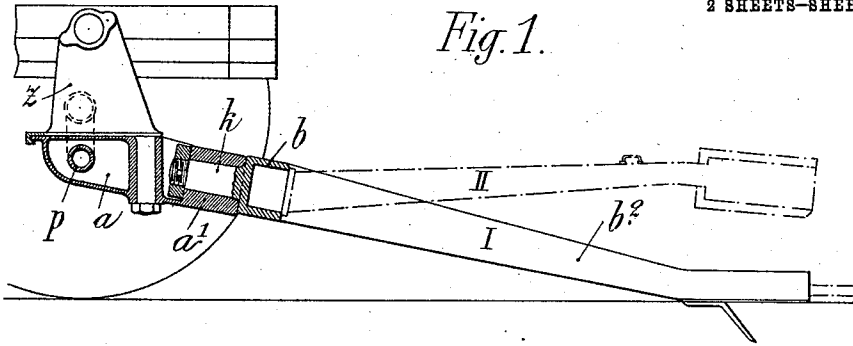


Fig. 1.

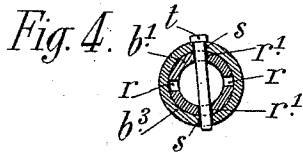


Fig. 4.

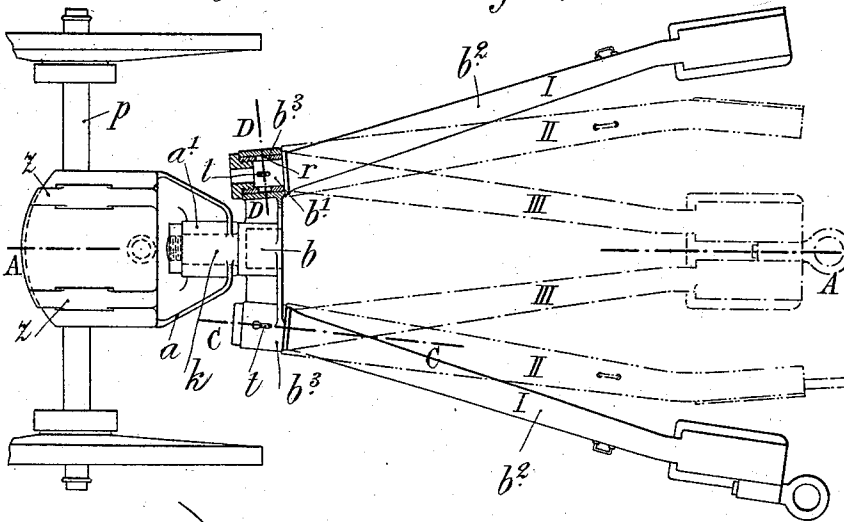


Fig. 2.

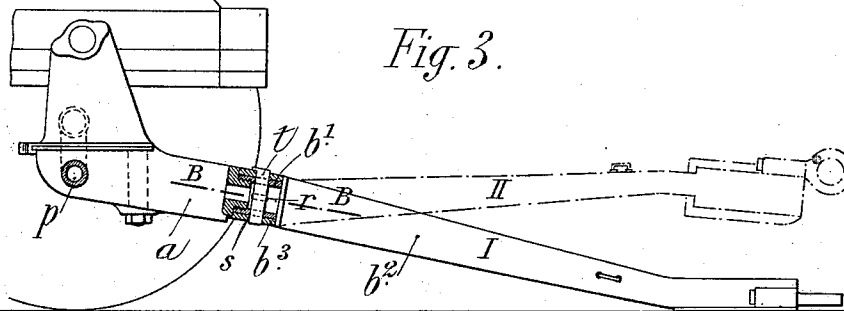


Fig. 3.

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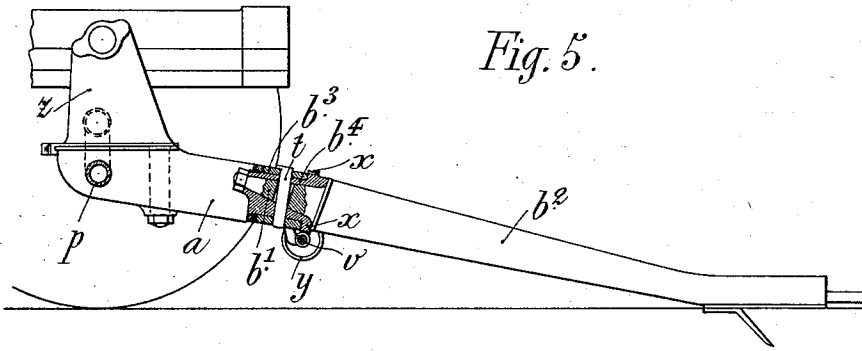


Fig. 5.

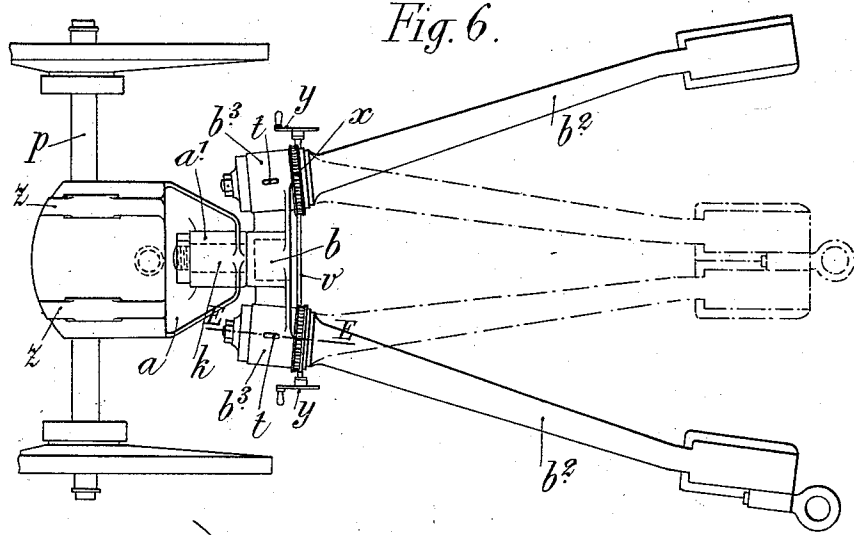


Fig. 6.

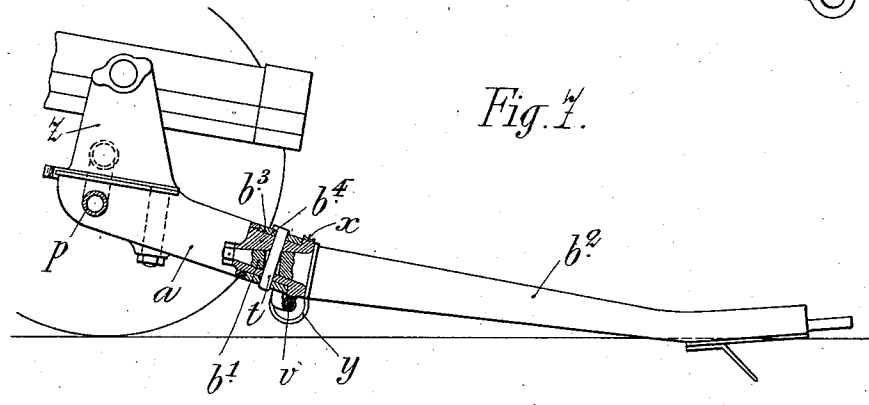


Fig. 7.

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UNITED STATES PATENT OFFICE.

EUGÈNE SCHNEIDER, OF LE CREUZOT, FRANCE.

GUN-CARRIAGE.

1,084,490.

Specification of Letters Patent.

Patented Jan. 13, 1914.

Application filed February 14, 1913. Serial No. 748,411.

To all whom it may concern:

Be it known that I, EUGÈNE SCHNEIDER, a citizen of the Republic of France, and resident of Le Creuzot, France, have invented
5 new and useful Improvements in or Relating to Gun-Carriages, which is fully set forth in the following specification.

This invention relates to gun carriages of the kind set forth in the specification of my
10 application for British Patent No. 7,265 of 1912.

According to the present invention, the frame which serves as the trail extension is divided into three elements, viz:—a base
15 connected to the trail body by a longitudinally arranged pivot, and two cranked members adapted to serve at will either as shafts for the draft animal or as stays to effectively
20 support the carriage when the gun is firing at extreme training angles. A part of each of the shafts is arranged at an angle to the main portion of the shaft and is pivoted to the base of the frame in such a manner that
25 when the shafts are angularly displaced they describe paths corresponding to the surfaces of cones. The shafts can be locked at will in various displaced positions. By these means, while constantly preserving absolute
30 rigidity of the frame in its position of use, it is possible to bring the free extremities of the shafts together while at the same time lifting them from the ground without causing the trail body to pivot around the wheel axle. Various positions relatively to the
35 plane of the base of the frame can be given to the free extremities of the shafts. For example there can be obtained the extreme separated position for use when the gun is firing, an intermediate position for direct
40 harnessing to a draft animal, and finally a position in which the shafts are completely brought together for connecting to a limber.

The shafts instead of being pivoted directly to the base of the frame, may be
45 pivoted in sleeves which are themselves movable in the said base, the axes of the sleeves in the base and those of the shafts in the sleeves not being in alinement. According as the shafts and the sleeves are rotated together
50 or the sleeves are rotated alone, a lifting and a simultaneous approach of the outer ends of the shafts can be produced in the first case while in the second case a lifting of the shafts but no movement toward
55 each other can be produced. It will be seen

that by rotating the sleeves alone a variation of the field of vertical fire of the gun can be obtained without altering of the distance apart of the shafts.

In order that the said invention may be
60 clearly understood and readily carried into effect I will describe the same more fully with reference to the accompanying drawings, in which:—

Figure 1 is a longitudinal section taken
65 approximately on the line A—A of Fig. 2. Fig. 2 is a plan having a part in section taken on the line B—B of Fig. 3. Fig. 3 is a view similar to Fig. 1 with a part in section on the line C—C of Fig. 2. Fig. 4 is a
70 detail cross-section on the line D—D of Fig. 2. Figs. 5 to 7 illustrate a modification of the invention in which Fig. 5 is a section taken approximately on the line E—E of
75 Fig. 6. Fig. 6 is a plan, and Fig. 7 a view similar to Fig. 5 but with the shafts in a different position.

In these figures *a* designates the trail body carried by the axle *p*. The trail extension which is in the form of a frame is hinged to
80 the trail body *a*. In accordance with the present improvement this frame comprises a base *b* provided on its front face with a trunnion *k* rotating in a corresponding bearing *a'* in the trail body. In or on the extremities
85 of the base *b* the two shafts (which also serve as stays) are journaled. These shafts are cranked and thus comprise an element or branch *b'* engaged in or on the extremities of the base *b* and an element or branch *b*²
90 arranged at an angle to the part *b'*.

In the example illustrated in Figs. 1 to 4, the branches *b'* of the shafts *b'*, *b*² are pivoted in bearings *b*³ formed at the lateral extremities of the base *b*. The shafts *b'*, *b*²
95 and the base *b* of the frame can be rendered integral or independent at will. With this object slots *r*, *r'*, and *s* are in the example shown formed in the branches *b'* and in the bearings *b*³ in which the shafts are pivoted.
100 The slots *r* or *r'* are caused to register with the slots *s* and a pin or key *t* or a spring bolt is passed therethrough, so that the shaft and the base are rigid. Assuming that the trail body *a* and the gun carriage as a whole
105 remain fixed, it will be noted that it is possible by allowing the pivot *k* of the frame which has been rendered rigid to turn freely in the socket *a'* of the trail body *a*, to allow the frame to rest on sloping ground. If on
110

the other hand the shafts b' b^2 are rendered independent of the base of the frame by withdrawing the pin t , it is possible by rotating the shafts in the bearings b^3 to cause the shafts b^2 to describe paths corresponding to the surfaces of cones. Thus starting from the position I shown in firm lines in Figs. 1 and 2 the shafts can be caused to assume the position II shown in broken lines or the position III also shown in broken lines in Fig. 2. In the position II the shafts, which are again locked by the insertion of the pin t , are separated a suitable distance for the direct harnessing of a draft animal. Finally in the position III the axes of the branches b^2 of the shafts are in the same plane as in position I but their extremities are brought together so that they can be united and serve as shown in broken lines in Fig. 2 for connecting to a limber.

In the example illustrated in Figs. 5 to 7 the extremities b' of the shafts are constituted by trunnions which are eccentric relatively to the bearings b^4 capable of rotation in the sockets b^3 formed at the lateral extremities of the base b of the frame. The trunnions b' can at will be rendered integral with the sleeves b^4 and the sockets b^3 in two different positions by means of keys 2 or they can be disconnected from the sleeves and the sockets. When the parts have been entirely connected the frame is perfectly rigid but is still able to turn in the trail body a on the pivot k . It is therefore possible, as in the preceding example to form a rigid frame with branches separated to a greater or less extent for resting on the ground, for direct harnessing to a draft animal, or for connecting to a limber. If the elements b' , b^4 , b^3 are disconnected, it is possible, by rotating the sleeves b^4 only, for example by means of worms and worm wheel gearing v , x operated by hand wheels y , to raise the rear ends of the shafts relatively to the trail body, as shown in Fig. 7 which depresses the rear of the carriage and thereby renders it possible to obtain an increased elevation of the gun. This result is obtained without changing the distance between the shafts and the width of the supporting base and consequently without affecting the maximum traverse of the gun.

With the parts in the position represented in Fig. 7, it is possible to displace the shafts b' , b^2 alone relatively to the sleeves b^4 which are held fast by the worm gearing relatively to the sockets b^3 , the same means as described in the preceding example (Figs. 1 to 4) being preferably employed.

The improved gun carriage possesses the advantage of furnishing a wide field for the vertical and lateral movements of the gun while at the same time retaining the advantages of ordinary gun carriages. The

trail body a always forms a direct and rigid support for the upper carriage z in which the gun is trunnioned. The usual three points of support are obtained for the upper carriage—these points being the two wheels and the trail body. The resultant of the forces in firing the gun necessarily passes through the pivot k between the said trail head and the trail extension. The joint k between the extension which is anchored in the ground by spades carried by the shafts and the trail body a enables the carriage and the trail to assume a correct position notwithstanding an uneven state of the ground.

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

1. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body, bearings carried by said base and arranged at an angle to said pivotal connection, and shafts adjustable in said bearings.

2. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body, bearings carried by said base and arranged at an angle to said pivotal connection, shafts adjustable in said bearings, and means for retaining said shafts in adjusted position.

3. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body to permit said base to be swung about an axis lying in the direction of travel of the carriage, bearings carried by said base and arranged at an angle to said pivotal connection, and shafts adjustable in said bearings.

4. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body to permit said base to be swung about an axis lying in the direction of travel of the carriage, bearings carried by said base and arranged at an angle to said pivotal connection, shafts adjustable in said bearings, and means for retaining said shafts in adjusted position.

5. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body, bearings carried by said base, and adjustable shafts each having one of its ends rotatable in one of said bearings, the other ends of said shafts being adapted to describe substantially a circle when adjusted.

6. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body, bearings carried by said base, adjustable shafts each having one of its ends rotatable in one of said bearings, the other ends of said shafts being adapted to describe substantially a circle when adjusted, and means for retaining said shafts in adjusted position.

7. In a gun carriage, the combination of a

trail body, a trail base having a pivotal connection with said body, bearings carried by said base, and adjustable shafts each having one of its ends arranged eccentrically in one of said bearings.

8. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body, bearings carried by said base, adjustable shafts each having one of its ends arranged eccentrically in one of said bearings, and means for adjusting said shafts.

9. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body, bearings carried by said base, adjustable shafts each having one of its ends arranged eccentrically in one of

said bearings, means for adjusting said shafts, and means for retaining the shafts in adjusted positions.

10. In a gun carriage, the combination of a trail body, a trail base having a pivotal connection with said body, bearings carried by said base, and adjustable shafts each having one of its ends arranged at an angle to the main portion thereof and mounted in one of said bearings.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EUGÉNE SCHNEIDER.

Witnesses:

HANSON C. COXE,
ROBERT DE PERELINGER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."