

(No Model.)

2 Sheets—Sheet 1.

E. G. PARKHURST
CARRIAGE FOR MACHINE GUNS.

No. 341,499.

Patented May 11, 1886.

Fig. 1

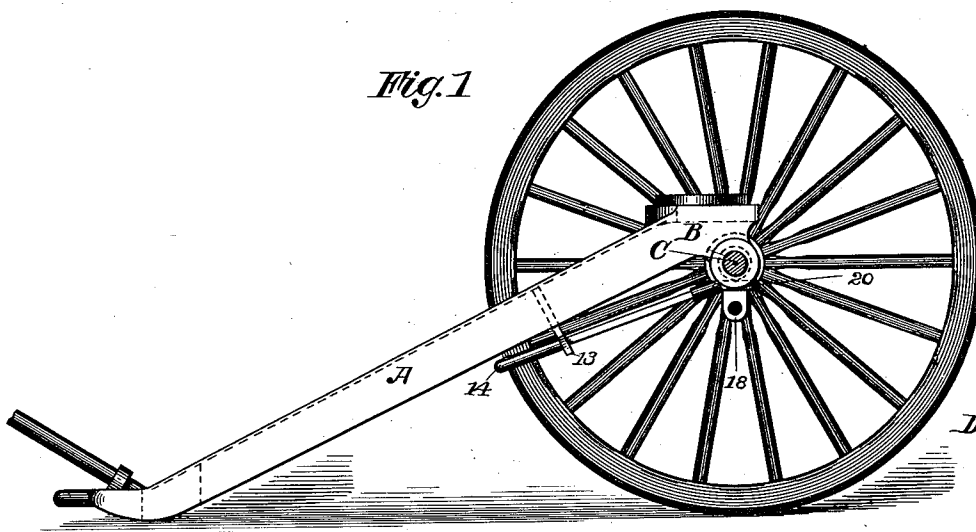
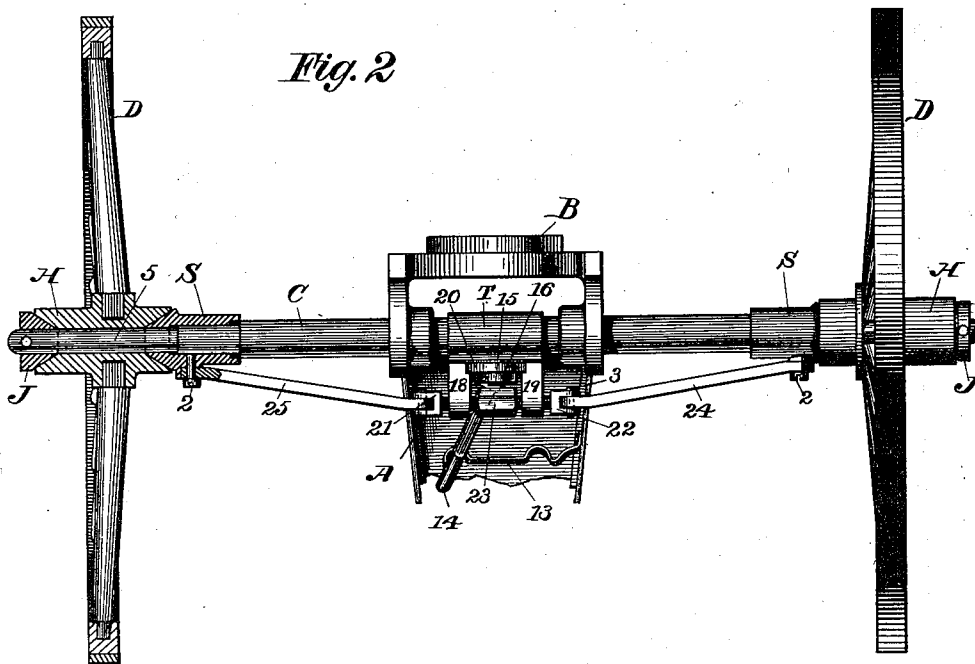


Fig. 2



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2 Sheets—Sheet 2.

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Fig. 7

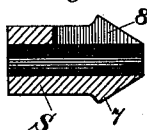


Fig. 6

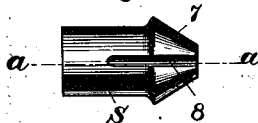


Fig. 3

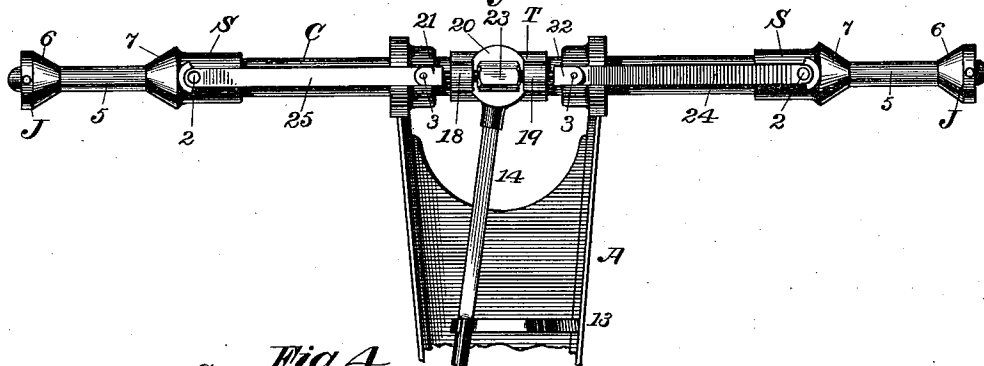


Fig. 4

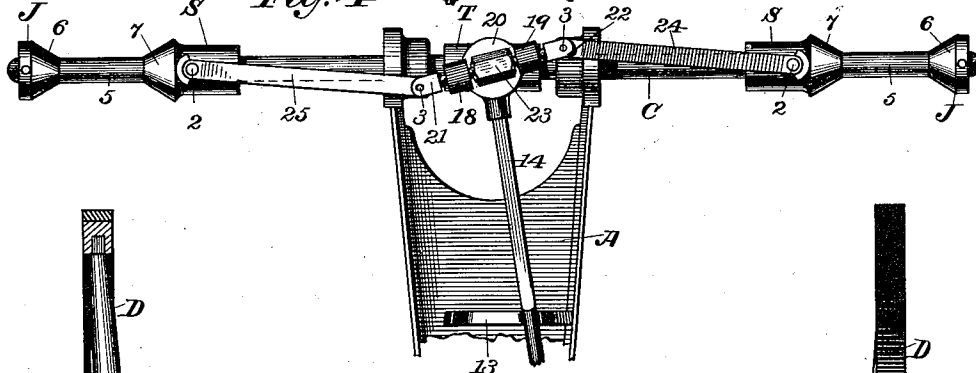
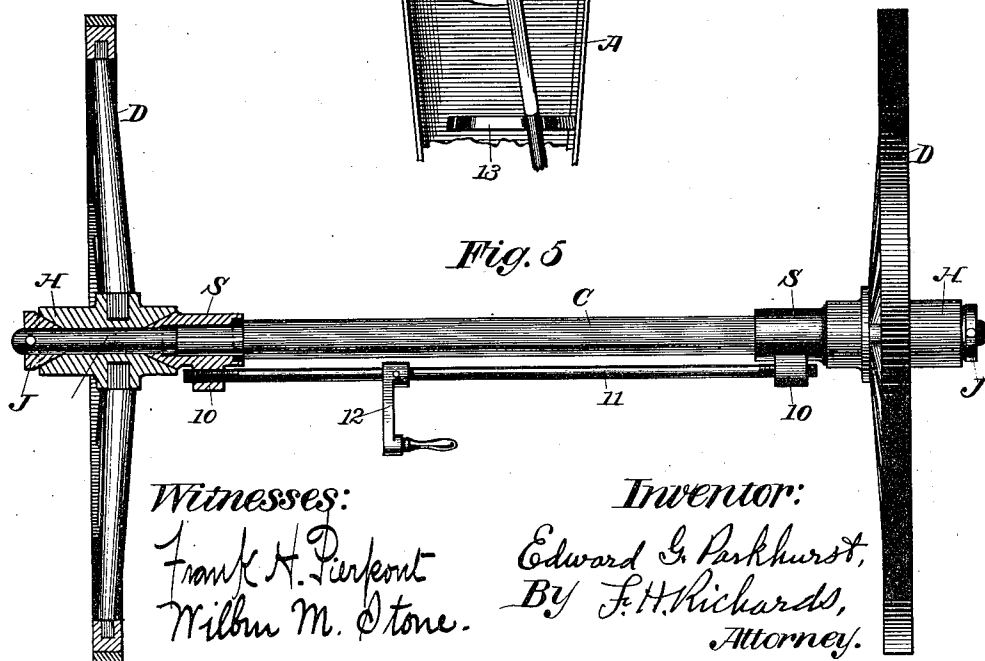


Fig. 5



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UNITED STATES PATENT OFFICE.

EDWARD G. PARKHURST, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE
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CARRIAGE FOR MACHINE-GUNS.

SPECIFICATION forming part of Letters Patent No. 341,499, dated May 11, 1886.

Application filed October 29, 1885. Serial No. 181,208. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. PARKHURST, a citizen of the United States, residing at Hartford, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Carriages for Machine-Guns, of which the following is a specification.

This invention relates to improvements in the wheel-brakes of gun-carriages, and in the mechanism for operating them.

The principal object of the invention is to reduce or prevent the lateral vibration or shacking of the carriage during the firing of a cannon or machine-gun supported thereon.

To this end the invention consists in the mechanism and combinations hereinafter set forth.

In the drawings accompanying and forming a part of this specification, Figure 1 is a side elevation of a gun-carriage embodying my improvements, one wheel being removed the better to disclose the mechanism. Fig. 2 is a front elevation of the carriage, a part being shown in section. Fig. 3 is a view of the under side with the wheels removed, and showing the operating mechanism in one position. Fig. 4 is a similar view showing said mechanism in another position. Fig. 5 illustrates a modified construction. Fig. 6 is a side view of one of the sliding conical sleeves. Fig. 7 is a section of the same in line *a, a*, Fig. 6.

Similar characters designate like parts in all the figures.

My improved gun-carriage comprises the frame A, of the ordinary or any suitable construction, and provided with a bed-plate, B, on which to mount the gun, an axle, C, and two similar wheels, D, one on either end thereof, and the mechanism for locking said wheels onto the axle. The hubs H of the wheels are fitted to the axle in the ordinary manner, and are conically bored or cupped in each end. (See Figs. 2 and 5.) Outside of the wheel-bearing 5 each end of the axle is furnished with a removably-fixed collar, J, and inside of said bearing with a sliding sleeve, S, preferably affixed to the axle. The inner ends of said collars and the outer end of the sleeves are conically-formed, to fit the corresponding conically-bored ends of the wheel-hubs.

When the carriage is to be moved the sleeve is allowed to remain slightly off from the hub, to act as a collar against which that may turn. During this time the wheel, which always in practice fits somewhat freely on the axle, rests fairly on wheel-bearing 5. On bringing the carriage to a halt, preparatory to firing the gun, it is desirable to take up the play between the bearing 5 and the hub, or (what is equivalent) to prevent the wheel having any lateral motion due to the play of the axle within the wheels. This I accomplish by forcibly sliding the sleeve S outward on the axle, thereby firmly clamping the wheel-hub between said sleeve and collar J, and thus supporting it on the oppositely disposed cones 6 and 7, practically free of bearing 5.

Unless the sleeve fits very closely on the axle, its efficiency may be increased by slitting the conical part thereof, as at 8, Figs. 6 and 7. This allows that end to close up and form a sort of circular wedge between the hub and axle, taking up all play due to wear or otherwise.

For operating sleeves S, I may employ any well-known means for forcibly actuating such or similar slides, and they may be operated either independently or conjointly. I prefer to operate them not only conjointly, but also simultaneously. One means for doing this (shown in Fig. 5) consists of the following: The sleeves S are each provided with a perforated projecting part, 10, one of which has a right-hand and the other a left-hand internal thread. A correspondingly-threaded rod, 11, has its opposite ends fitted into the opposite projections, respectively, and has a lever or handle, 12, whereby it is operated. By turning said rod in one direction the sleeves are forced apart and the two wheels clamped, and by turning it in the other direction they are released. In this arrangement each wheel furnishes the resistance necessary for forcing the opposite sleeve against the other wheel.

Another and preferred mechanism for operating the sleeves is shown in the first four figures. A tubular casting, T, is rigidly fixed about centrally on the axle, and has a depending stud, 15, Fig. 2, whereon is secured by nut 16 the swivel-plate 20. This plate is operated by handle 14 and has two similar per-

forated ears, 18 19. The handle is arranged to swing between its respective positions in Figs. 3 and 4, a spring-latch, 13, being provided to detain it therein. The two ears of plate 20 carry the central part of a double toggle-joint, which part comprises the two end parts, 21 22, the inner end of one having a right-hand and of the other a left-hand thread, and a right and left nut, 23, adjustably connecting said end parts. Link 24 connects end part 22 with one sleeve S, while the similar link 25 connects end part 21 with the other sleeve S. Said links being attached to the sleeves and end parts, respectively, by ordinary pivot pins or screws, 2 and 3. This mechanism being in the position shown in Fig. 4, the adjusting-nut 23 is turned to force out the end parts, 21 22, and links 24 25, and through these sleeves S until these stand close to but not clamping the wheel-hubs. On now throwing handle 14 to the left and straightening the toggles, as in Fig. 3, the sleeves are forced out against the hubs, and these against collar J, putting all the parts involved under a firm tension, and preventing any vibration due to wear or loosely-fitting parts.

Some degree of success may be attained with a plain collar in place of the collar J, the outer end of the hubs being in that case uncupped, and by my claims I intend to cover such modification equally with the preferred construction above described.

Having thus described my invention, I claim—

1. The combination, in a wheel-brake, of an axle, a wheel conically bored on each end, a conical collar fixed on the axle at one side of said wheel, a sliding conical sleeve at the other side of said wheel, and operative mechanism, substantially as described, operating to clamp the wheel between said collar and sleeve, all arranged to operate substantially as set forth.

2. The combination, in a carriage, of an axle, a wheel on each end of said axle having its hub cupped, substantially as described, a

fixed collar outside of each wheel, a sliding sleeve inside of each wheel and fitting the cupped hub thereof, and operative mechanism, substantially as described, simultaneously operating to clamp both wheels, substantially as set forth.

3. The combination, in a carriage, of axle C, having wheel-bearing 5, wheel D, having hub H, conically bored on each end, collar J, having a conical end fitting one end of said hub, and sliding sleeve S, fitting the other end of said hub, substantially as set forth, and for the purpose specified.

4. The combination, in a carriage, of axle C, having wheel-bearing 5, wheel D, having hub H, conically bored on each end, collar J, having a conical end fitting one end of said hub, sliding sleeve S, fitting the other end of said hub, and actuating mechanism, substantially as described, operating said sleeve, substantially as set forth, and for the purpose specified.

5. The combination, in a carriage, of an axle, a wheel on each end of said axle having its hub cupped, substantially as described, a fixed collar outside of each wheel, a sliding sleeve inside of each wheel and fitting the cupped hub thereof, and a toggle-joint mechanism, substantially as described, simultaneously operating to clamp both wheels, substantially as set forth.

6. The combination, in a carriage having an axle, C, of sleeves S, swivel-plate 20, links 24 25, and the adjustable central part carried by said plate and connecting with said links, substantially as set forth, and for the purpose specified.

7. The combination, in a wheel-brake, of the axle and a wheel-hub cupped in one end and a sleeve sliding on said axle and fitting the cupped end of said hub, said sleeve being slitted at its tapered end to allow it to close onto the axle, substantially as set forth.

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