

No. 675,405.

Patented June 4, 1901.

M. PAUL & P. SOCK.

APPARATUS FOR LIMBERING OR UNLIMBERING HEAVY ORDNANCE.

(No Model.)

(Application filed Oct. 9, 1900.)

3 Sheets—Sheet 1.

Fig. 1.

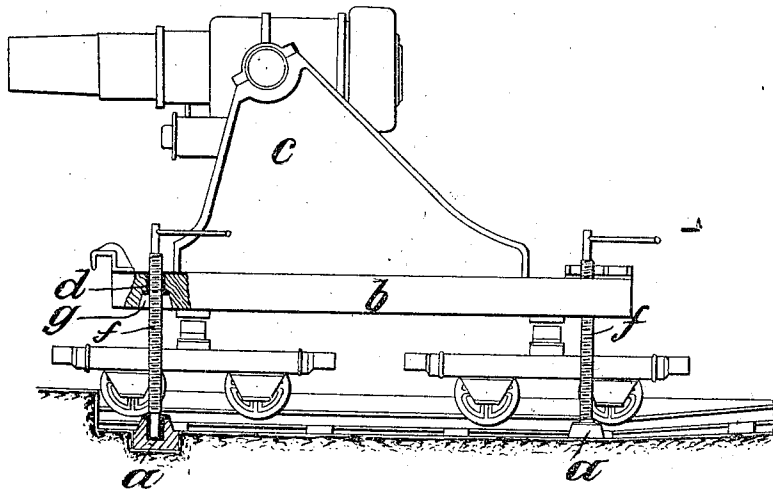
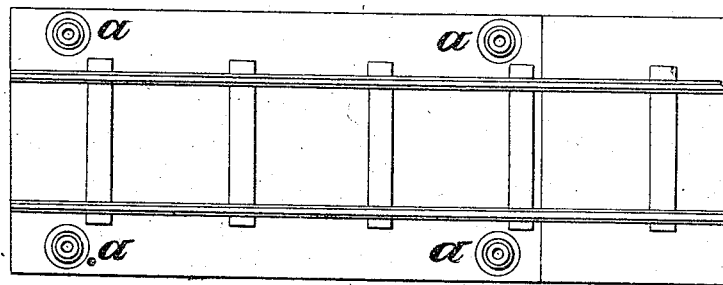


Fig. 2.



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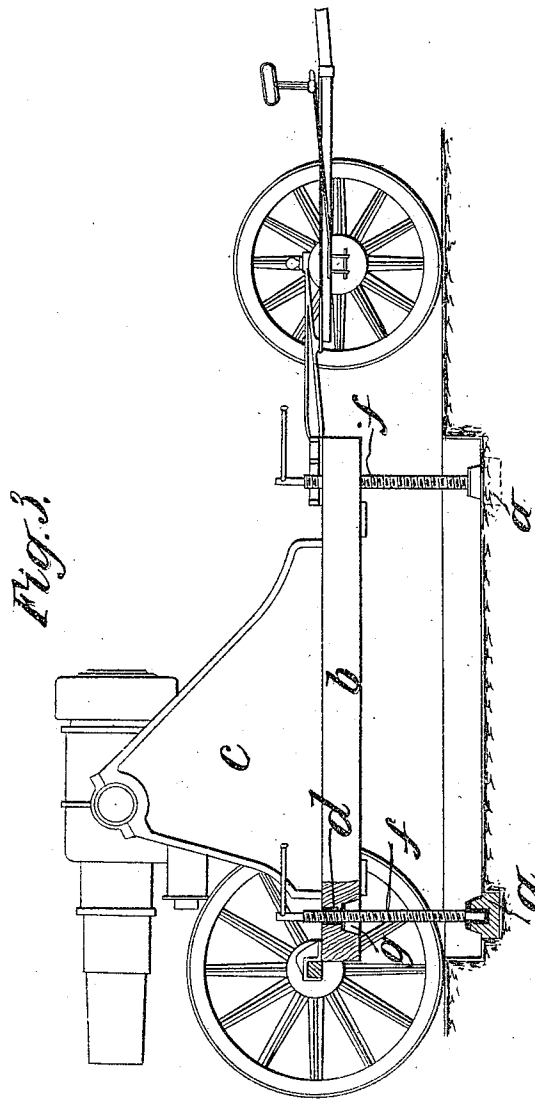
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3 Sheets—Sheet 2.



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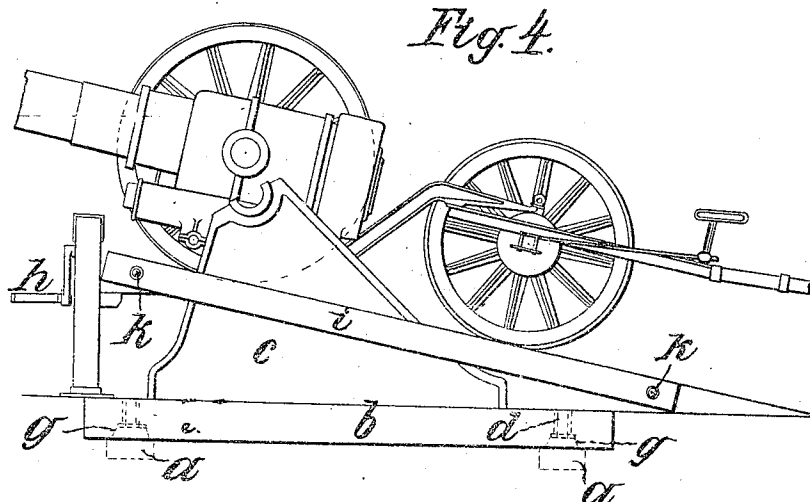
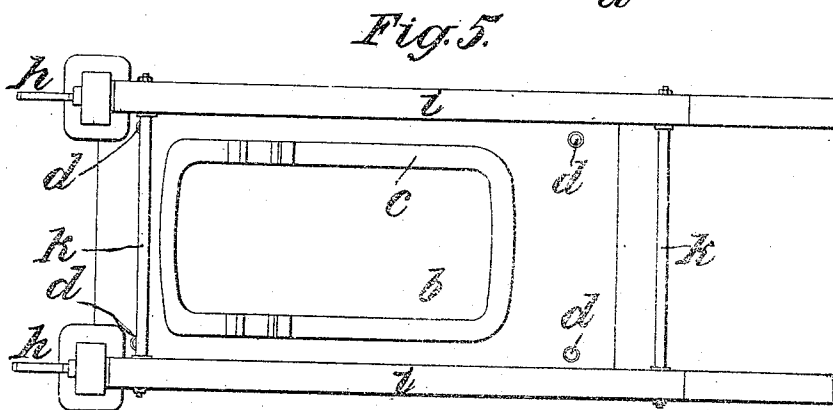
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

MORITZ PAUL AND PAUL SOCK, OF PILSEN, AUSTRIA-HUNGARY, ASSIGNORS
TO SKODAWERKE, ACTIENGESellschaft IN PILSEN, OF SAME PLACE.

APPARATUS FOR LIMBERING OR UNLIMBERING HEAVY ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 675,405, dated June 4, 1901.

Application filed October 9, 1900. Serial No. 32,524. (No model.)

To all whom it may concern:

Be it known that we, MORITZ PAUL and PAUL SOCK, subjects of the Emperor of Austria-Hungary, residing at Pilsen, in the Province of Bohemia, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Apparatus for Limbering and Unlimbering Heavy Ordnance; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to apparatus for enabling ordnance which is transported in parts or entire on field-railway vehicles or on wheels by means of limbers and is mounted on a wooden or iron base-plate or is rigidly connected thereto to be easily brought into the firing position and to be again mounted on wheels for the purpose of transport or to be placed on a field-carriage or a field-railway vehicle. Apparatus according thereto comprises, essentially, a number of screw-spindles, each of which has a nut arranged in the base-plate and can be inserted into a foot-bearing sunk into the ground at the place desired, so as to enable the base-plate to be removed from the field-railway vehicle or from the field-carriage and when the latter has been drawn out enable the base-plate to be lowered to the ground. For guns transported in pieces there is also provided a lifting device by means of which the trunnions of the gun-tube can be brought over and lowered into their bearings in the gun-mounting that has been lowered to the ground in the manner hereinbefore described, and the vehicle carrying the gun-tube can then be removed therefrom.

Apparatus according to this invention is shown in the accompanying drawings, in which—

Figure 1 is a sectional elevation of a gun in process of being transferred from a pair of railway-trucks to its firing position, and Fig. 2 is a corresponding plan. Fig. 3 is a view similar to Fig. 1, representing a gun mounted

on road-wheels. Figs. 4 and 5 show the lifting device used in combination with this apparatus for a gun transported in parts.

As will be seen, a number of foot-bearings *a* are sunk into the ground at the place where the gun is to be brought into the firing position. The gun mounted on field-railway vehicles or on road-wheels, or when it is transported in parts the gun-mounting *c* alone connected to or mounted upon the base-plate *b*, is run over these foot-bearings. In the base-plate there are arranged in corresponding number and positions to the foot-bearings nuts *d* for receiving screw-spindles *f*, which when screwed in bear first upon the foot-bearings and when further rotated raise the gun or the base-plate and gun-mounting from the field-railway vehicles or road-wheels, so that the latter can be run out from below, and when subsequently rotated in the opposite direction allow the base-plate *b* to descend to the ground, whereupon the spindles can be removed. When the base-plate *b* rests on the ground, the foot-bearings *a* extend into the recesses *g* for the nut, so that if the base-plate is moved during firing the foot-bearings always remain under the nuts and insure that the screw-spindles will bear in the foot-bearings when the gun is again raised for transport, which is effected by a process the reverse of that just described.

When in the case of guns transported in parts the base-plate and gun-mounting are removed in the manner hereinbefore described from the field-railway vehicles or road-wheels and are lowered, balks *i*, which are connected together by distance pipes and screws to form a firm supporting-frame, are placed at both sides of the carriage and raised to an inclined position by means of jacks *h*, Fig. 4. The wheels carrying the gun-tube and the limber are then run up on the balk *i* by means of jacks or hauling-gear, and as soon as the trunnions of the gun-tube are located above the trunnion-bearings the balks are lowered until the trunnions rest therein. Further lowering of the balks *i* liberates the road-wheels, which can then be removed.

For the purpose of transport the parts of the gun must be again separated and loaded in parts, and in this case the lifting device is

first operated and then the apparatus for raising the base-plate, the process being in reverse order.

We claim—

5 1. The combination with a gun-mount and jack-screws for raising and lowering the same working in suitable nuts in said mount; of foot-bearings for said jack-screws to be sunk in the emplacement for the gun, said foot-
10 bearings fitting recesses in the gun-mount when lowered into position for firing, for the purpose set forth.

2. The combination of a gun-mount, jack-screws working in suitable nuts in said mount
15 for raising and lowering the same, and foot-

bearings for said screws, sunk in the emplacement for the mount and fitting recesses therein when the mount is lowered into firing position; of means for positioning a gun-carriage with the gun-trunnions above the trunnion-bearings of the mount, substantially as
20 and for the purposes set forth.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

MORITZ PAUL.
PAUL SOCK.

Witnesses:

JOSEF RUBARD,
ALVESTO S. HOGUE.