

No. 756,205.

PATENTED APR. 5, 1904.

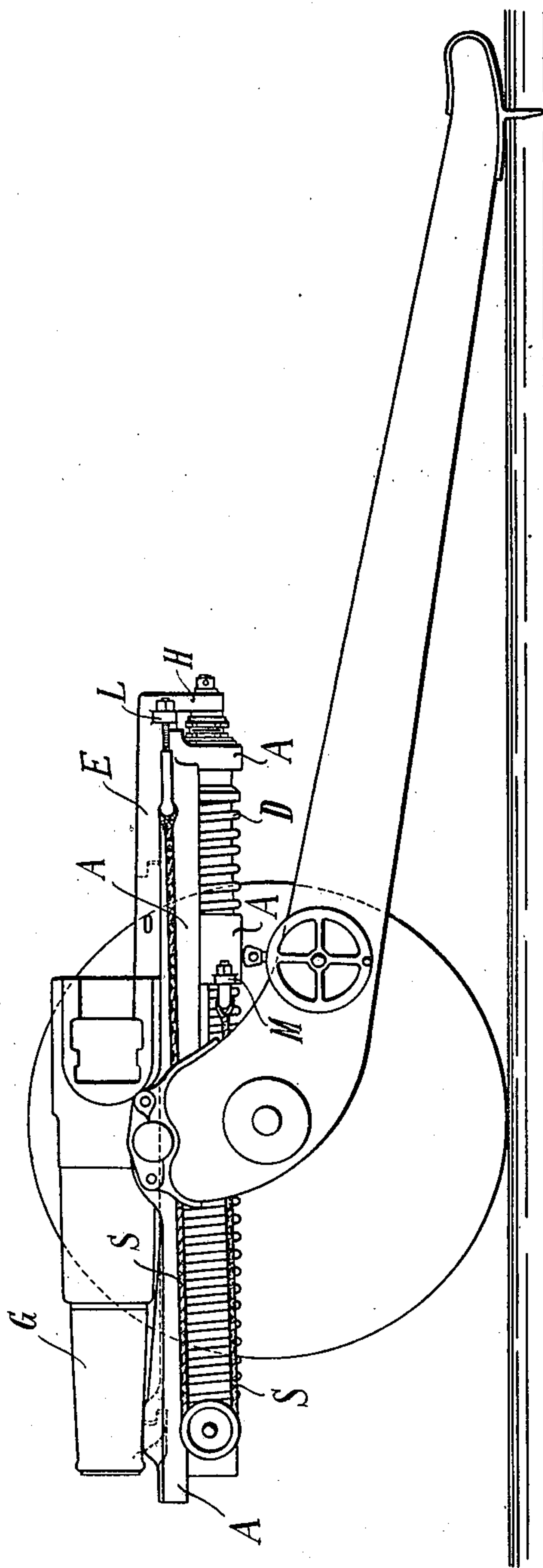
O. BEHNKE.
RECOIL CARRIAGE FOR ORDNANCE.

APPLICATION FILED SEPT. 4, 1901.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.



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NO MODEL.

2 SHEETS—SHEET 2.

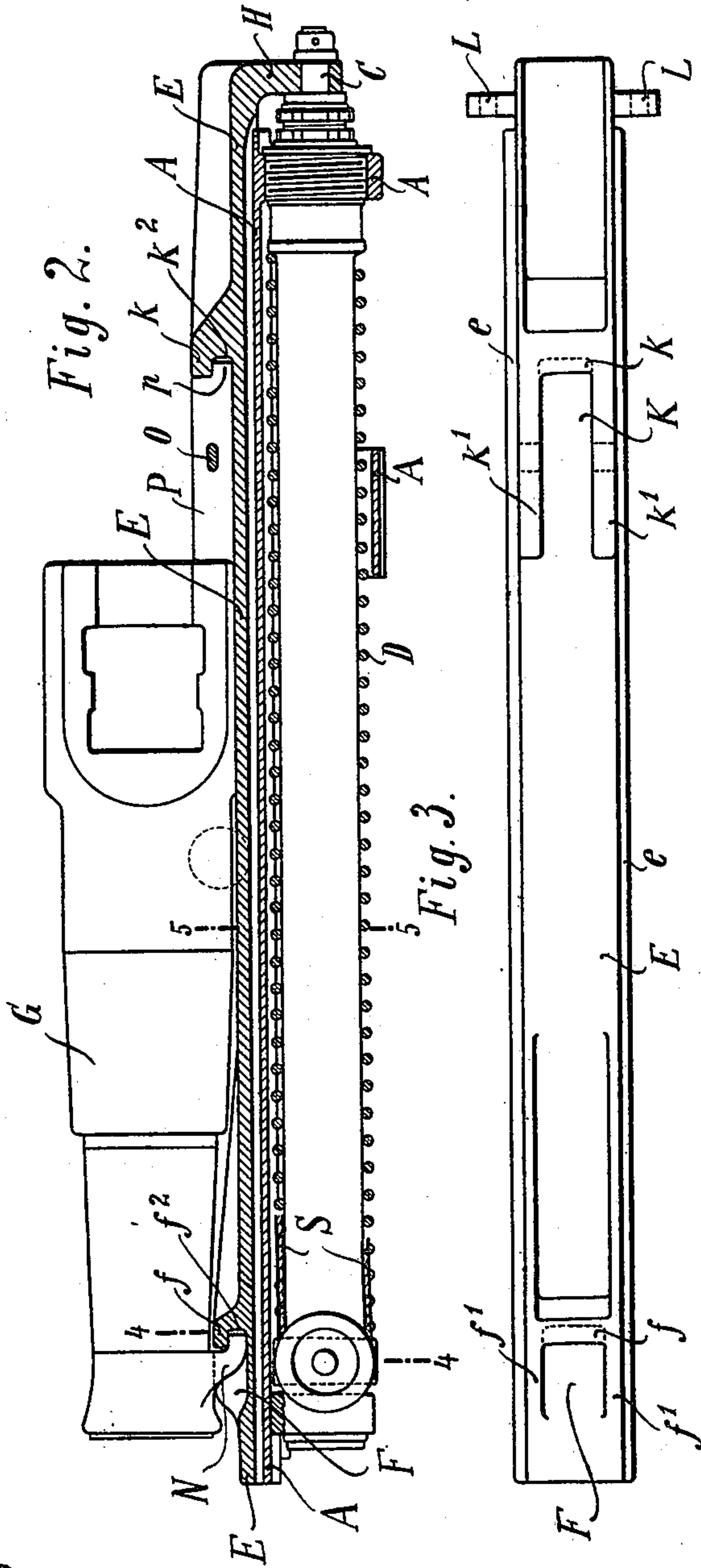


Fig. 6.

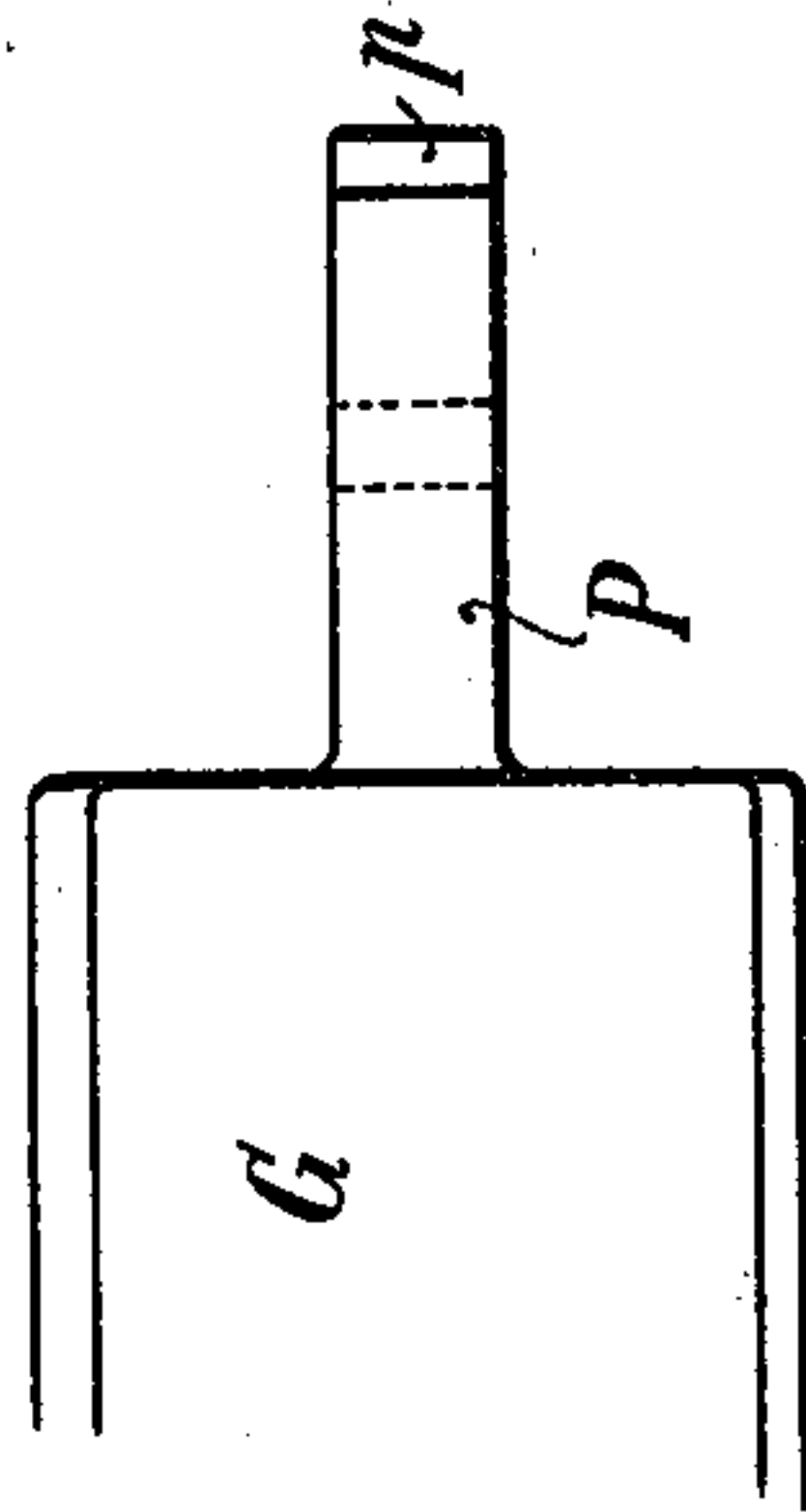


Fig. 5.

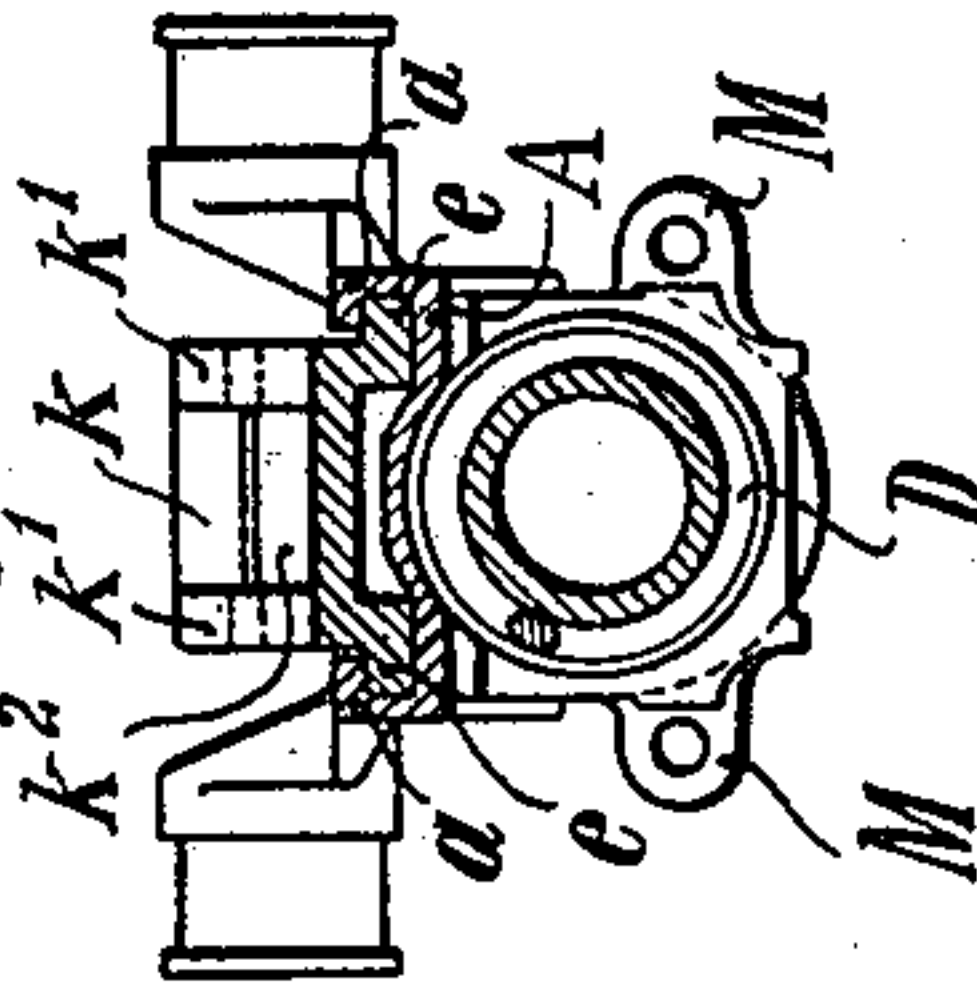
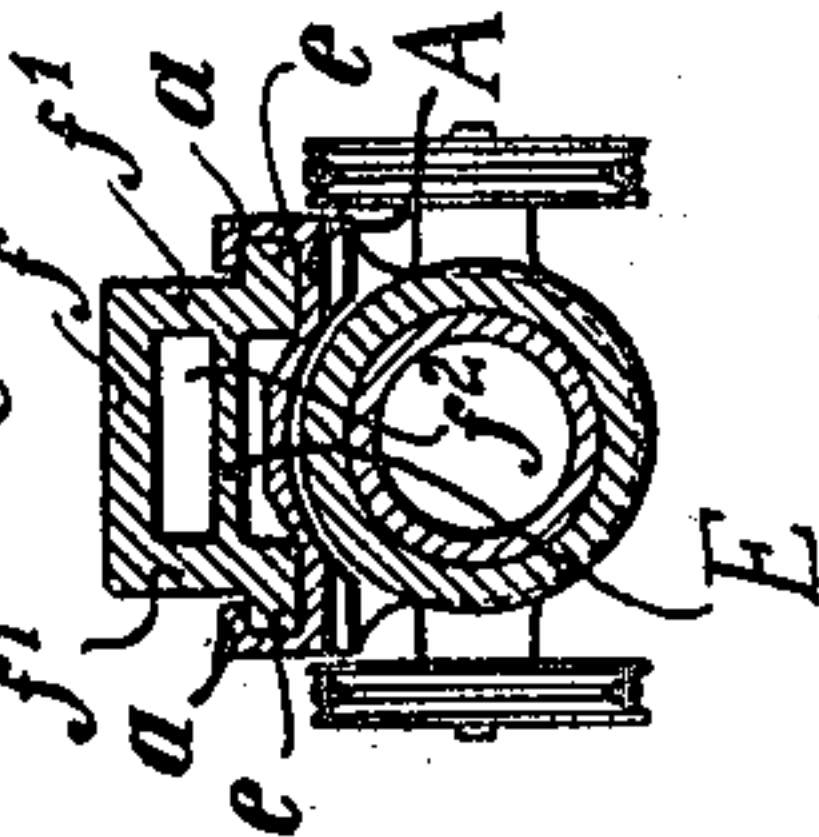


Fig. 4.



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UNITED STATES PATENT OFFICE.

OTTO BEHNKE, OF ESSEN-ON-THE-RUHR, GERMANY, ASSIGNOR TO FRIED.
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RECOIL-CARRIAGE FOR ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 756,205, dated April 5, 1904.
Application filed September 4, 1901. Serial No. 74,303. (No model.)

To all whom it may concern:

Be it known that I, OTTO BEHNKE, engineer, residing at 36 Bismarckstrasse, Essen-on-the-Ruhr, Germany, have invented certain new and useful Improvements in Recoil-Carriages for Ordnance, of which the following is a specification.

The present invention relates to wheeled carriages for ordnance of that class in which the barrel recoils on the carriage, and has for its object to provide a construction whereby a long recoil may be obtained in comparatively short-barreled guns, such as mountain and landing guns, and at the same time to protect the slide-track as much as possible from injury.

The object aimed at is essentially attained by having the gun-barrel mounted in the cradle by means of a separate slide whose length overreaches that of the barrel and sufficiently so to enable the slide in its position for firing to cover the entire sliding track.

In the accompanying drawings the invention is represented as adapted to mountain-artillery.

Figure 1 is a side view of the complete gun. Fig. 2 shows the cradle, slide, and barrel partly in vertical section and partly in side elevation. Fig. 3 shows the slide in a top or plan view. Figs. 4 and 5 are sections on the line 4 4 and 5 5, respectively, of Fig. 2 viewed from the left. Fig. 6 shows the breech of the barrel in an upper view.

The gun-barrel G is secured upon the slide E in a manner to be easily detachable, which slide is slidingly mounted upon the cradle A by means of guide-strips *e* entering undercut guides *a* in the cradle. The length of the slide E exceeds that of the gun-barrel G to such an extent that in the firing position of the barrel the slide covers the entire slide-track *a* of the cradle. For the production of an easily-detachable connection between the barrel and the slide two box-shaped super-structures F and K are arranged on the latter, which are formed, respectively, of two side walls *f'* *f'* and *k'* *k'* and back walls *f* and *k*. Each back wall *f* and *k* is provided with an

undercut seat *f*² and *k*². On the barrel near its mouth is formed a hook-shaped projection N, which lies in the box F of the slide and engages with the seat *f*². At the breech of the barrel there is a tail-like piece P with an offset *p*. The piece P lies in the box K of the slide, and the projection *p* enters the seat *k*². The connection between the barrel and the slide is secured by a wedge O. The braking of the recoil and the bringing forward again of barrel and slide can be accomplished in any desired manner. In the gun-carriage illustrated in the drawings I have applied a firing-brake of previously-known construction, according to which the piston-rod C of the recoil-brake enters into a downwardly-projecting horn H of the slide, while the ropes S, which transfer the motion of the barrel and slide to the spring D, are partly secured to the lugs M of the cradle and partly to the lugs L of the slide.

The mode of operation of the gun-carriage in firing does not materially differ from that of other gun-carriages in which the barrel recoils, as the barrel and slide are firmly connected, and this needs no further elucidation here; but the gun-carriage herein described affords material advantages over gun-carriages in which the barrel recoils and runs out directly—*i. e.*, without the introduction of a separate slide—on a long slide-track which it may embrace by claws, among which advantages may be enumerated the following: In the first place, comparatively short barrels can have a long recoil. At the same time the slide-track is amply protected against injury, as it is only exposed during the short interval in which the barrel runs back and forward. Besides, the barrel can be easily taken off from the slide. This is done by withdrawing the wedge O out of its seat, sliding the barrel out of the seats *f*² and *k*², and then lifting it out. This arrangement is specially of great advantage for mountain-guns, the parts of which must generally be transported separately, especially since the slide and cradle can be carried in an assembled condition. Consequently when dismounting and mounting the gun

there is, in contradistinction to guns the barrel of which recoils directly on the cradle, no time wasted in disconnecting and connecting the barrel, brake-piston rod, and return-spring, which are very complicated operations, nor the sliding apart and the troublesome shoving together of the barrel and cradle is required. Finally, the slide way or tracks remain protected by the slide during transportation of the disassembled gun, so that dirt cannot enter into the guides, nor can damage of the same by knocks, &c., occur.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In wheeled gun-carriages in which the barrel recoils on a cradle, the combination with the cradle and a barrel, of a separate slide sliding on the cradle, and interlocking means on the slide and barrel located at points on the exterior of the barrel leaving the main exterior surface of the latter free, and moving into and out of locking relation by a slight longitudinal movement of the barrel, and readily-releasable means for preventing the slight unlocking, longitudinal movement of the barrel on the slide.

2. In wheeled gun-carriages in which the barrel recoils on a cradle, the combination with the cradle and the barrel, of a separate slide sliding on the cradle, means on the lower part of the barrel, and means on the upper part of the slide coöperating with the means on the barrel to hold the said barrel and slide together.

3. In wheeled gun-carriages in which the barrel recoils on a cradle, the combination with the cradle and the barrel of a separate slide sliding on the cradle and locking means permitting the barrel to be readily connected to and detached from the slide, said locking means comprising engaging lugs on the lower

side of the barrel and the upper side of the slide.

4. In wheeled gun-carriages, the combination with a cradle, of a slide-track in which the barrel recoils, the length of the slide-track exceeding that of the barrel and extending a substantial distance in the rear of the barrel, a separate slide sliding on the cradle and locking means permitting the barrel to be readily connected to and detached from the slide, said locking means being effective only between the upper part of the slide and the lower part of the barrel.

5. In wheeled gun-carriages, the combination with a cradle, of a slide-track in which the barrel recoils the length of the slide-track exceeding that of the barrel and extending a substantial distance in the rear of the barrel, a separate slide sliding on the cradle, locking means permitting the barrel to be readily connected to and detached from the slide, the slide in its firing or transport position covering the entire slide-track, thus protecting the slide-track against injury.

6. In wheeled gun-carriages in which the barrel recoils on a cradle, the combination with the cradle and the barrel, of a separate slide sliding on the cradle and provided with undercut recesses, the barrel having projections entering the recesses in the slide, and a wedge passing through portions of the barrel, and the cradle for the purpose of establishing an easily-detachable connection between the barrel and the slide, substantially as specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

OTTO BEHNKE.

Witnesses:

WILLIAM ESSENWEIN,
PETER LIEBER.