

No. 638,313.

W. H. BEVANS.
GUN CARRIAGE.

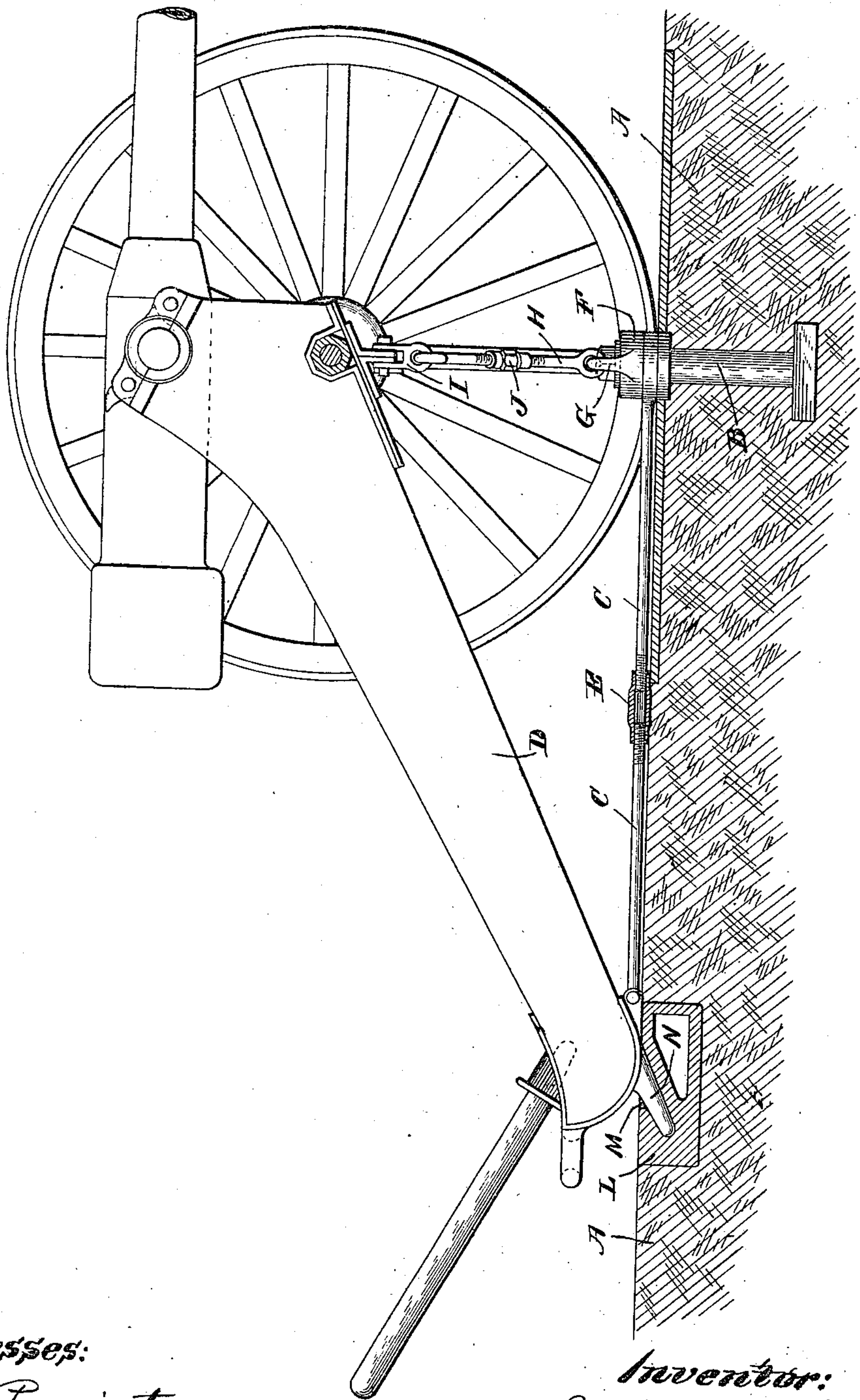
Patented Dec. 5, 1899.

(No Model.)

Application filed Feb. 2, 1899.)

2 Sheets—Sheet 1.

Fig. 1.



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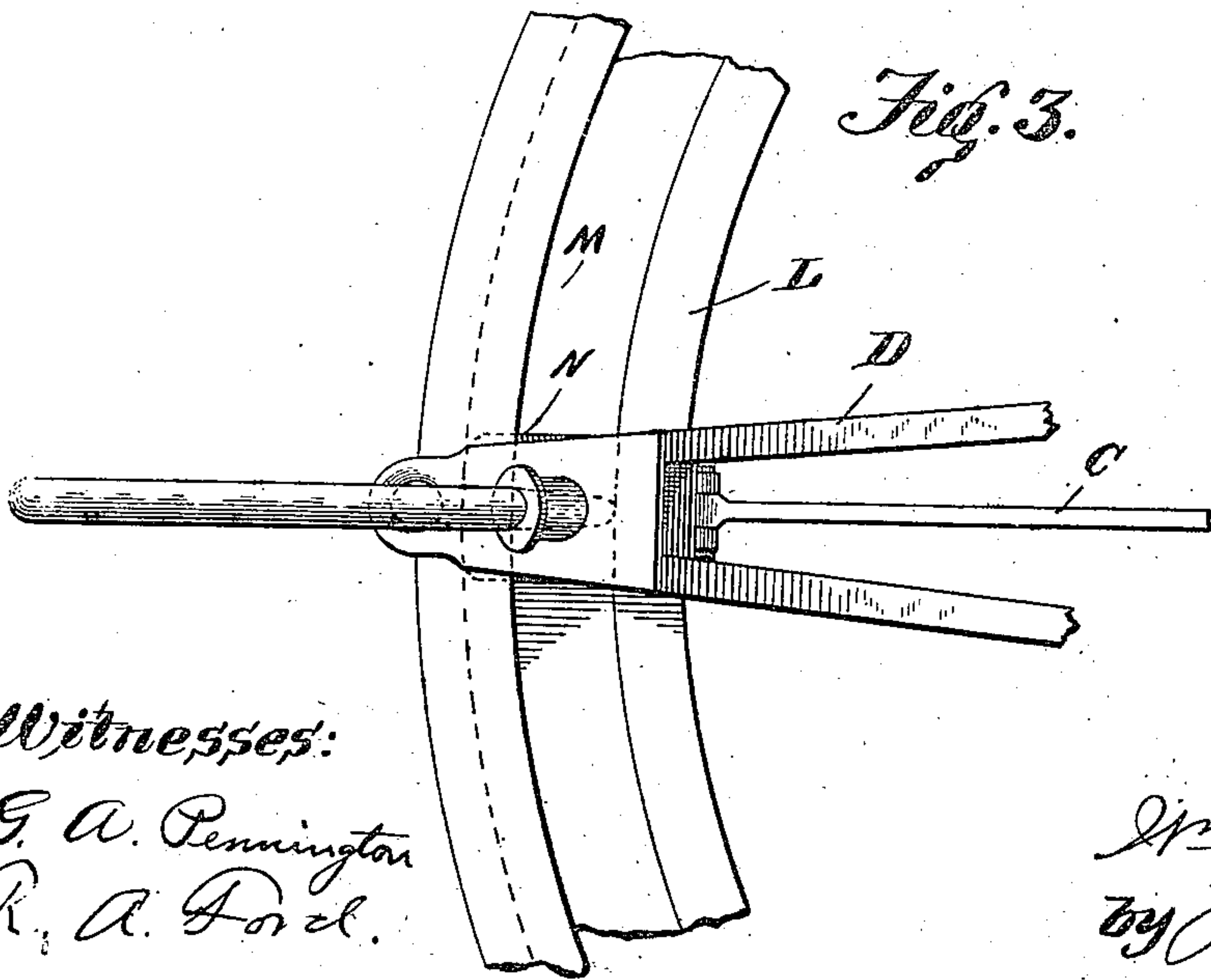
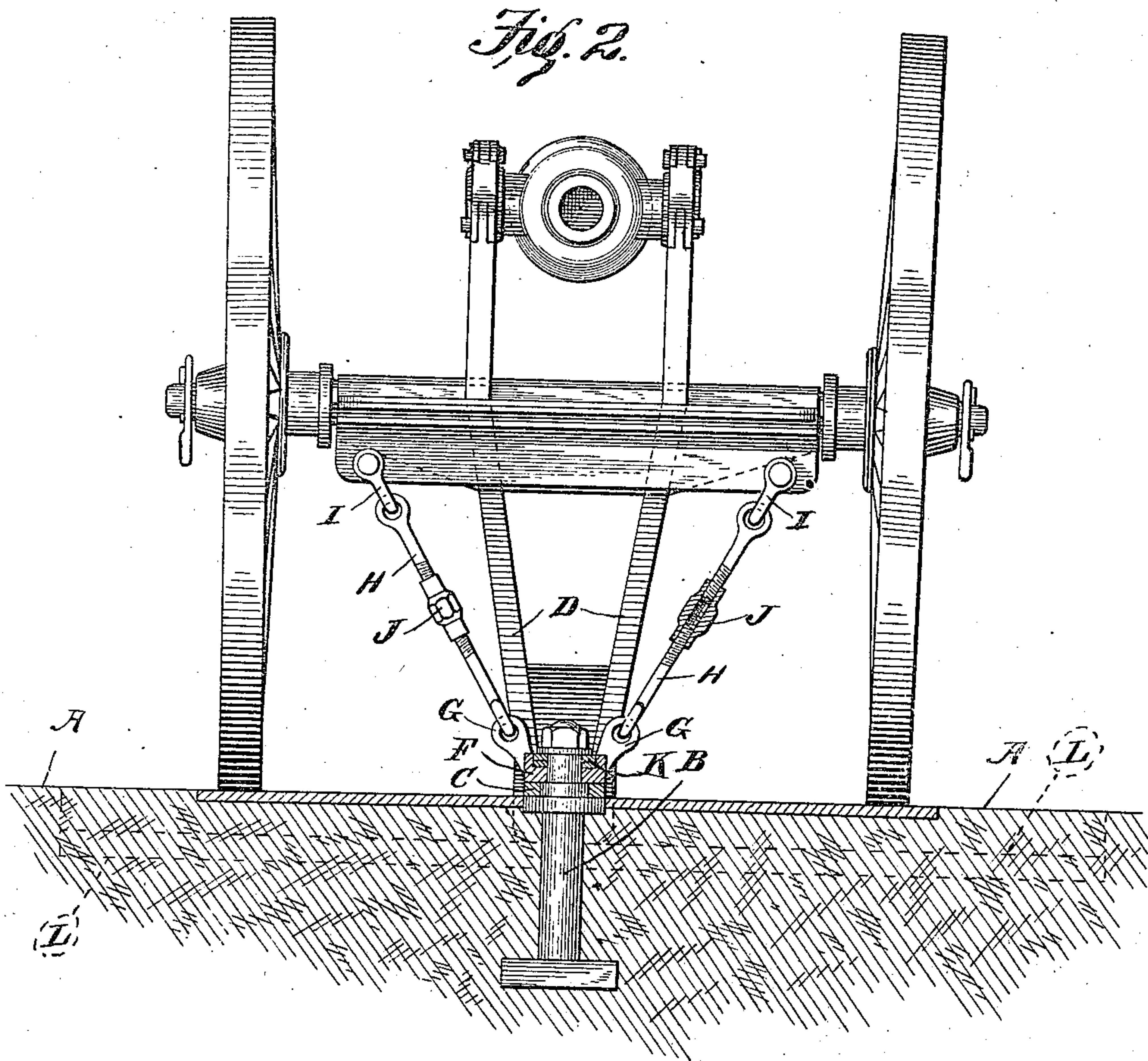
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE

WILLIAM H. BEVANS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
TO THE AMERICAN ORDNANCE COMPANY, OF SAME PLACE.

GUN-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 638,313, dated December 5, 1899.

Application filed February 2, 1899. Serial No. 704,245. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BEVANS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gun-Carriages; and I 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.

My invention relates to improvements in gun-carriages, and particularly to means for effectively preventing the recoiling and jumping of the carriage caused by the shock incident to the recoiling of the gun when the same is fired.

The invention is particularly adapted for field-carriages when mounted behind parapets, when it is necessary to provide some means for preventing the recoiling and jumping of the carriage and at the same time permitting it to be readily moved in a horizontal plane to facilitate the aiming of the gun, the construction employed being capable of ready attachment to the carriage, so that the latter may be quickly secured upon the platform in a substantially immovably fixed position during the firing of the gun. Owing to the intense shock attending the recoiling of the gun the construction for preventing the recoil movement of the carriage, in order to be effective, must be capable of withstanding a great amount of strain.

While I have illustrated my invention in the present instance as applied to a field-carriage, it will be apparent to those skilled in the art that it could be applied without material change to other forms of wheeled carriages, such as siege and fortress carriages.

The invention consists in the details of construction, which will be fully described hereinafter, particularly pointed out in the claims, and illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, showing a field-carriage mounted upon a platform and provided with my improved recoil-resisting construction. Fig. 2 is a front elevation, partly in section. Fig. 3 is a fragmentary top plan view showing a portion of the trail and the trail-retaining device.

Referring now more particularly to the accompanying drawings, A designates the platform or foundation of the emplacement, having fixed therein in any preferred manner a vertical pivot or stud B, which is threaded at its upper end and formed adjacent thereto with two annular shoulders. A bar C is pivoted at one end to the trail D of the carriage, and at its opposite end is formed with an eye, so that it may be placed over the pivot or stud and rest upon one of the annular shoulders formed thereon. This bar C is formed in two sections, threaded at their opposing ends and connected by a turnbuckle E. When the eye of this bar is placed over the stud, the bar is adjusted so that the center of the axle of the carriage is brought directly over the center of the pivot or stud. The free end of the bar may be swung upwardly and secured to the carriage by any suitable device when the carriage is used in the field. This bar constitutes a holdback for preventing the recoiling of the carriage when the gun is fired.

A collar F is freely movable upon one of the shoulders of the pivot and is formed with laterally-projecting perforated ears G on opposite sides of its center. A suitable nut upon the threaded end of the pivot or stud retains said collar and bar in proper position thereon. Holddown-rods H are formed at their ends with eyes, which engage, respectively, the perforated ears G and eyes formed in clevises or clips I, detachably secured to the axle-plate at equidistant points on opposite sides of the center of the axle. These rods H are formed in sections, having their opposite ends threaded and connected by turnbuckles J, so that the rods may be adjusted to prevent upward movement of the carriage. Flexible washers K are interposed between collar F and the securing-nut, a seat being provided in the upper end of said collar to receive the same and constitute a cushion to reduce the shock and the strain upon the holddown-rods when the gun is fired. It will be readily understood that the compression of these washers is very slight, and while by their use a very advantageous and effective construction is provided, yet by actual test of the holddown device it has been found that they may be omitted and the effectiveness of the construc-

tion not in any way impaired, the holddown device being substantially rigid. I do not, therefore, desire to limit myself to the use of washers or any similar buffer, as they are not essential.

Embedded in the platform or foundation beneath the trail-piece or trail-tread of the carriage when the latter is in position behind the parapet is a plate L, having formed therein a rearwardly and downwardly inclined slot M, which is formed on the arc of a circle drawn with the pivot or stud as the center. The usual spade N, carried by the trail-piece, engages and moves in this slot and is prevented by the upper wall thereof from disengaging the same by upward movement. This plate assists the bar C in preventing recoiling of the carriage and also prevents upward movement of the trail-piece.

From the above description it will be seen that I have provided an exceedingly strong and effective construction for preventing the recoiling and jumping of the carriage during the firing of the gun and have provided said construction adjustable and in addition thereto a cushion for reducing the shock and strain upon the recoil-restraining construction.

It will be apparent that slight changes and modifications might be made in the construction hereinbefore described without departing from the spirit and scope of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with a wheeled gun-carriage pivotally mounted upon a platform, of means for movably securing the trail to the platform at a point independent of and in rear of the pivotal point of the carriage, so as to prevent vertical movement of the trail but permit the same to swing in a horizontal plane, substantially as described.

2. The combination with a wheeled gun-carriage, of means for pivoting the same upon a platform, and means for directly connecting the trail-tread to the platform, so as to prevent vertical movement of the trail-tread but permitting the same to swing in a horizontal plane, substantially as described.

3. The combination with a wheeled gun-carriage, pivotally mounted upon a platform and having the trail thereof carrying a projection, of a fixed plate formed with a slot receiving said projection, and retaining the same so as to prevent vertical movement of the trail but permitting the same to swing in a horizontal plane, substantially as described.

4. The combination with a wheeled gun-carriage and an emplacement-platform, of a holddown-rod connected at one end to said carriage, and means for pivotally connecting the opposite end of said holddown-rod to the platform, substantially as described.

5. The combination with a wheeled gun-carriage pivotally mounted upon a platform, and the trail-spade, of a plate carried by the platform and formed with a retaining-slot adapted to receive said spade and prevent vertical movement of the trail, but permit the same to move in a horizontal plane, substantially as described.

6. The combination with a gun-carriage and an emplacement stud or pivot, of an adjustable holddown-rod pivotally connecting said carriage and stud, and a recoil-resisting device pivotally connecting the carriage-trail and said stud, substantially as described.

7. The combination with a gun-carriage and an emplacement stud or pivot, of a collar rotatable on said stud, holddown-rods connected to said collar and to the axle of the gun-carriage on opposite sides of the center thereof, and a recoil-resisting device pivotally connecting the carriage-trail and said stud, substantially as described.

8. The combination with a gun-carriage and an emplacement stud or pivot, of a holddown-rod connected at its respective ends with said carriage and stud and pivotally connecting the same, and a recoil-resisting device pivotally connecting the carriage-trail and stud, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. BEVANS.

Witnesses:

J. HENRY GULICK,
THOS. B. HUYCK.