

(No Model.)

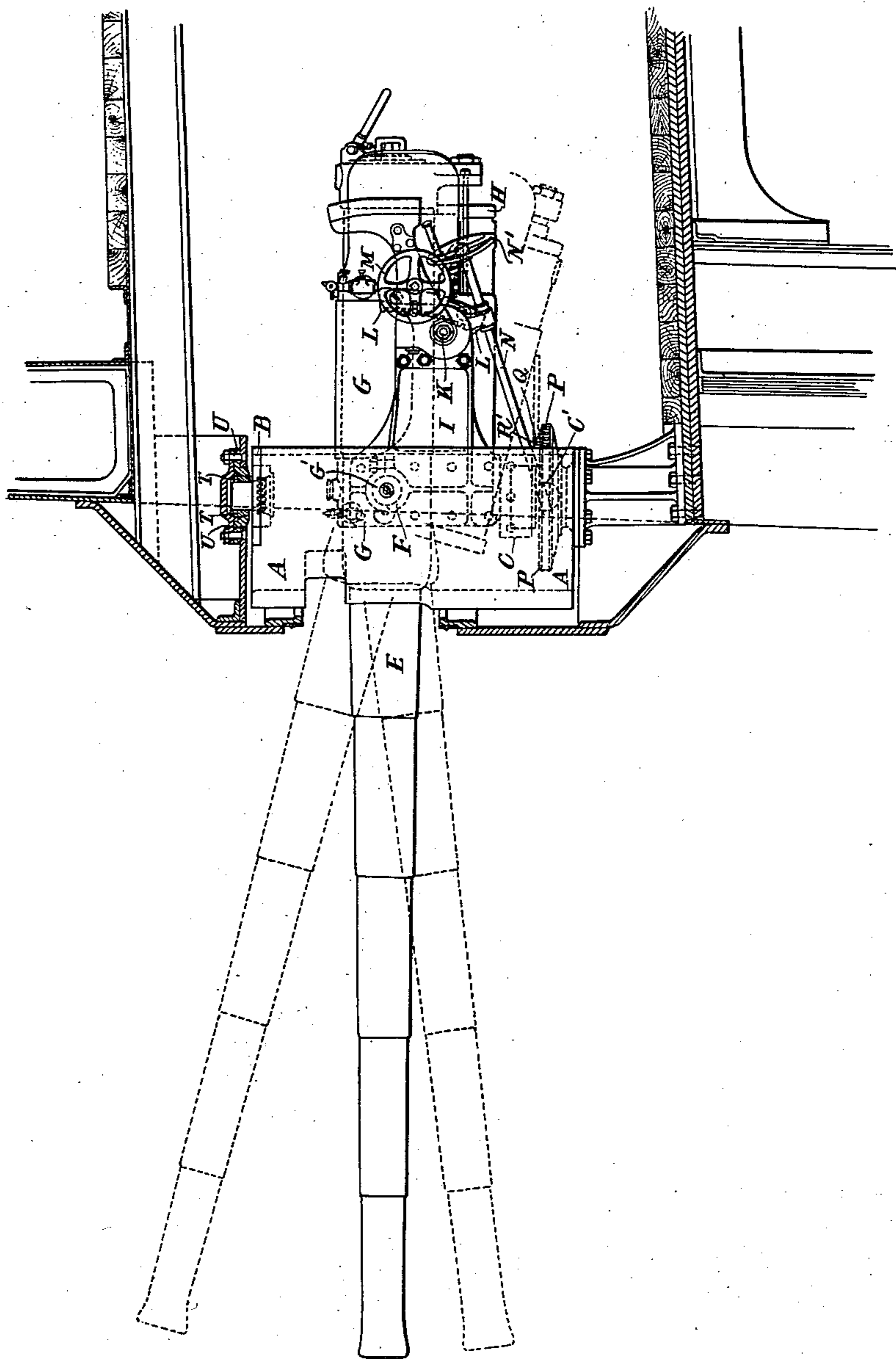
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J. VAVASSEUR.
MOUNTING FOR ORDNANCE.

No. 397,764.

Patented Feb. 12, 1889.

Fig. 1.



Witnesses.

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Baltus & Long.

Inventor,

Josiah Vavasseur,
By his Atty.
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(No Model.)

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Fig. 5.

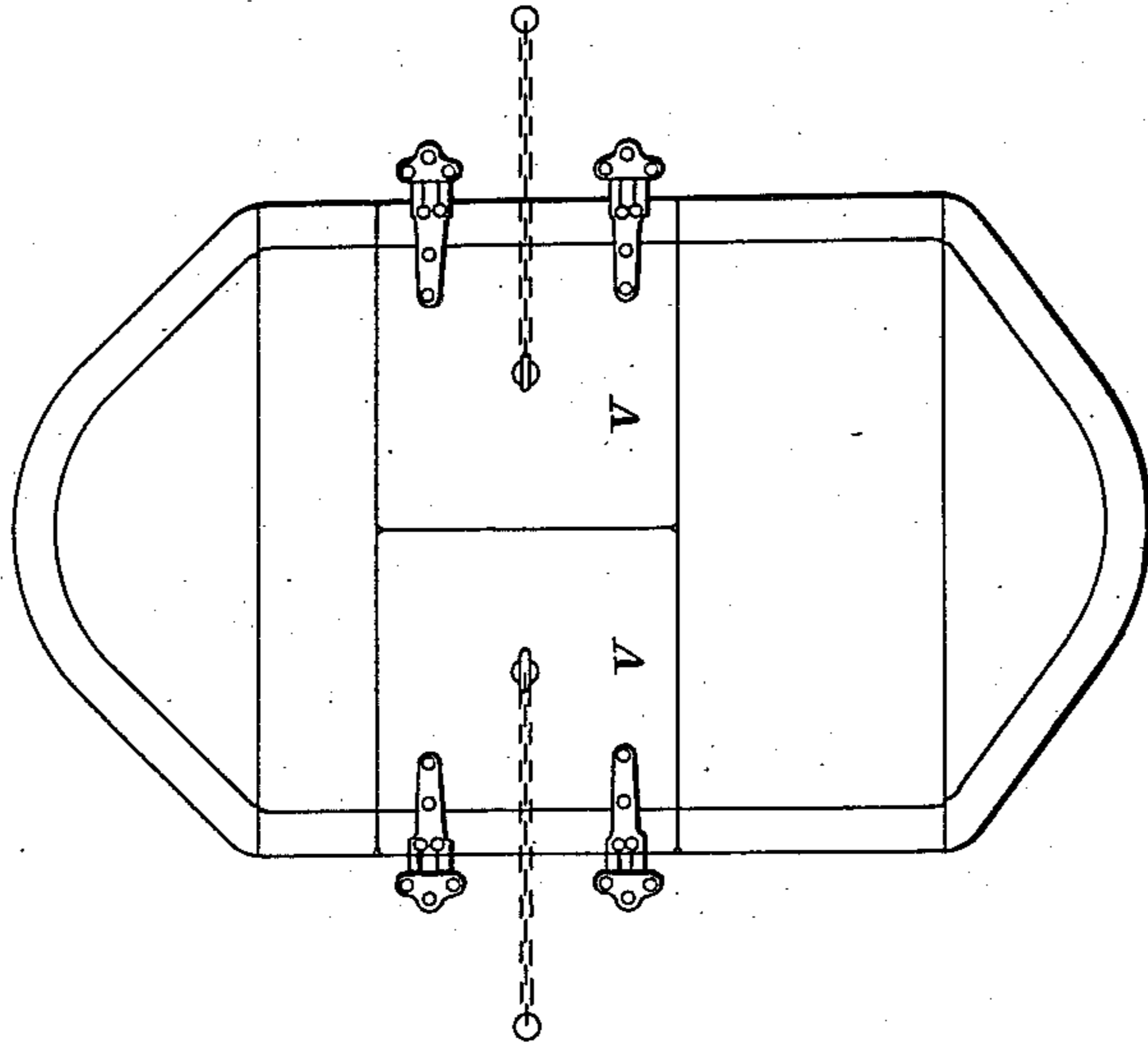
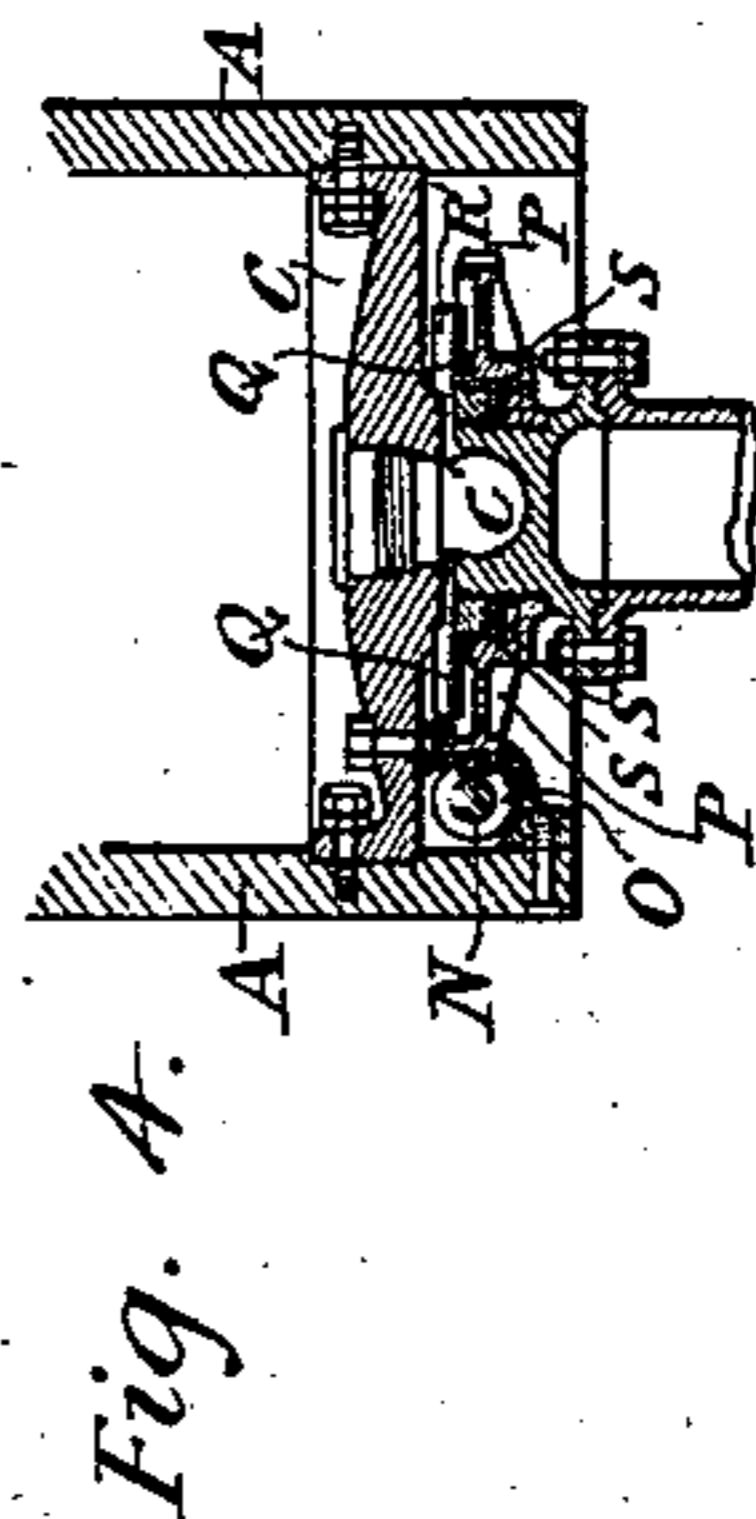
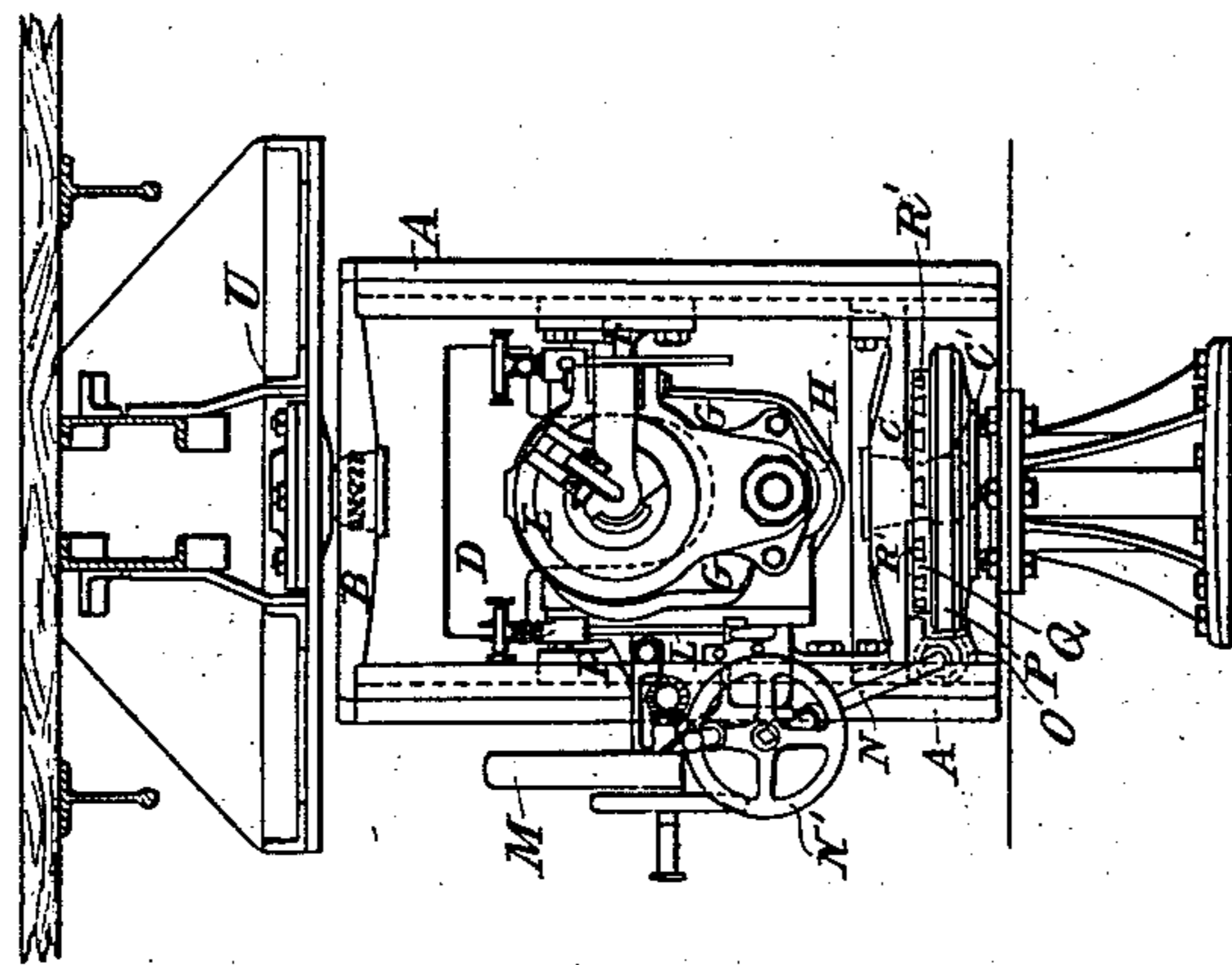


Fig. 2.



Witnesses.

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(No Model.)

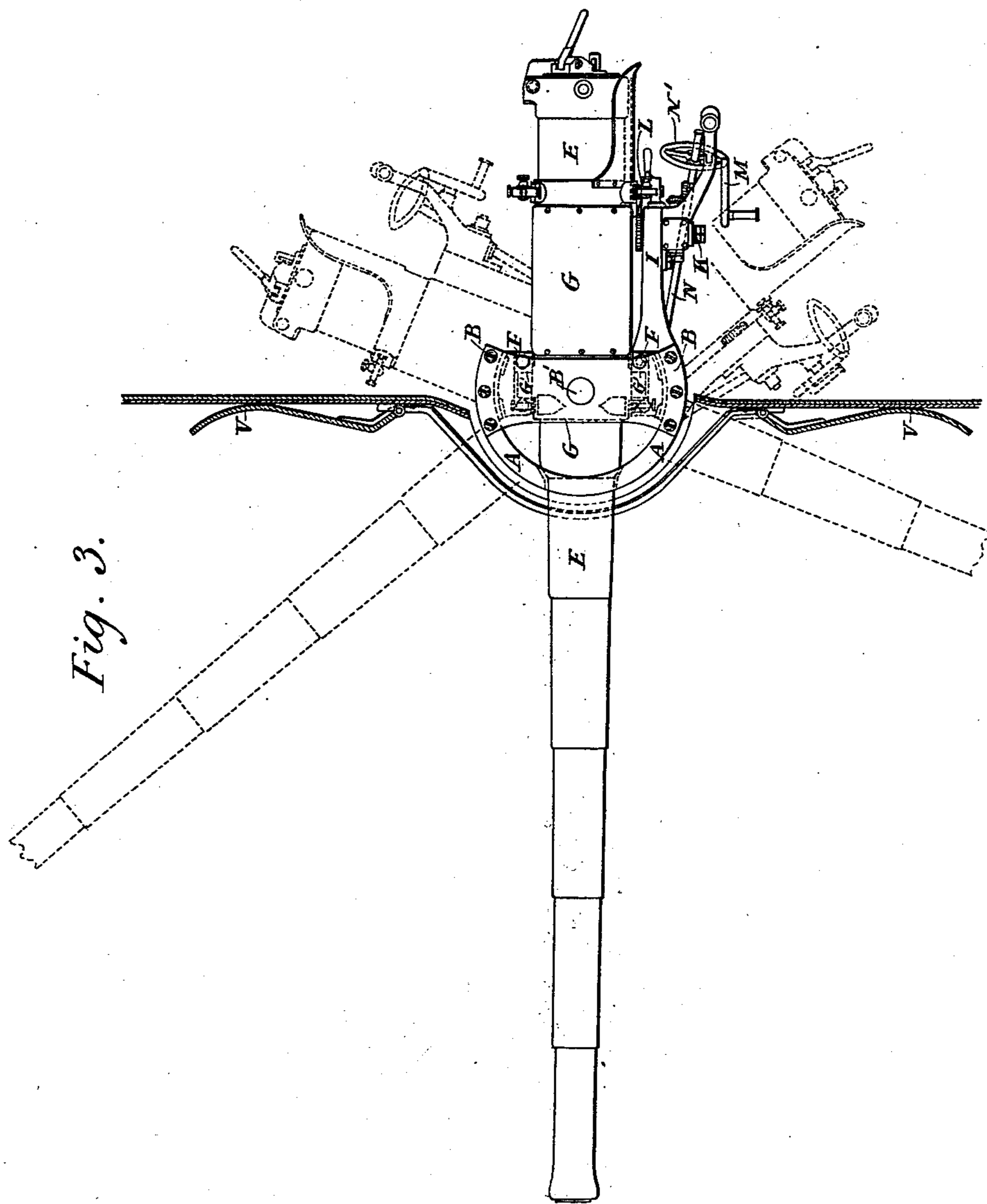
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UNITED STATES PATENT OFFICE.

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MOUNTING FOR ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 397,764, dated February 12, 1889.

Application filed October 8, 1888. Serial No. 287,537. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH VAVASSEUR, engineer, a subject of the Queen of Great Britain, residing at the London Ordnance Works, Bear Lane, Southwark, in the county of Surrey, England, have invented an Improved Mounting for Rapid-Firing Guns, of which the following is a specification.

This invention has for its object an improved mounting for rapid-firing guns.

This mounting is intended as a broadside mounting for use between decks on shipboard, and also in forts. It consists of a shield formed of an armor-plate bent to a semi-cylindrical form. To this shield are bolted cross-bars, one at the top and another at the bottom. A port is cut through the armor-plate sufficiently large to admit the barrel of the gun and allow the necessary elevation and depression, and also to allow of aiming. Within this semi-cylindrical shield bearings are fixed, one on either side, and in these are carried the trunnions of a cradle, in which the gun can slide in recoil under the control of hydraulic apparatus and springs, which latter, when the recoil is expended, bring the gun back to the firing position. The bottom pivot is globular, and it is received into a corresponding cup. The gun, together with the shield, can be trained either by means of a shoulder-piece fixed to the gun or by gearing. There is a worm-wheel free to turn upon the exterior of the lower cup-like bearing, and with this wheel a worm gears. The worm can be turned by means of a hand-wheel and intermediate axis. When it is desired to make use of the mechanical training-gear, the worm-wheel is locked fast upon the cup-bearing, and this is done by means of clutch and friction plates, which are pressed together by a ring screwing on the exterior of the bearing. The upper pivot of the shield is cylindrical and is received into a brass of globular form held in a bracket fixed overhead, so that the brass is able to adjust itself in the bearing if from the straining of the ship or any other cause the bracket should be displaced from its original alignment.

In order that my said invention may be

more fully understood and readily carried into effect, I will proceed to describe the drawings hereunto annexed.

In the drawings, Figure 1 is an elevation of a gun-mounting arranged in accordance with my invention. Fig. 2 is a rear elevation. Fig. 3 is a plan. Fig. 4 is a section, to a larger scale, of some of the parts. In these figures the gun is shown as mounted on shipboard. Fig. 5 shows in elevation the doors by which the broadside-port can be closed when the gun is withdrawn.

A A is the semi-circular shield of a bent armor-plate.

B is the top cross-bar fixed to it and carrying the upper pivot, B'.

C is the lower cross-bar carrying the bottom pivot, C'.

D is the opening in the shield, through which the gun E projects.

F F are bearings fixed within the shield A, and in these bearings the trunnions G' G' of the cradle G are carried.

H is the recoil-cylinder. It forms part of the cradle and is beneath the gun. It contains the hydraulic apparatus and springs, by which the recoil is checked and the gun returned to the firing position. This recoil apparatus is of the ordinary description and is not shown in detail. The mechanism for closing the breech of the gun also forms no part of the present invention and is not shown in detail.

I is an arm projecting from the shield A and carrying the axis K, on which is a pinion gearing with a rack, L, attached to the cradle. This axis is turned by means of a hand-wheel, M, and intermediate gear, and gives to the gun the necessary elevation and depression in aiming.

N is an inclined axis with a hand-wheel, N', upon it. It serves for training the gun. At its lower end the axis N is connected by a joint with the worm O, which turns in bearings upon the shield A. The worm gears with a worm-wheel, P, which is able to turn freely upon the exterior of the cup-formed bearing Q. This bearing, as will be seen, receives the globular pivot C', carried by the cross-bar C,

and it is itself suitably supported from the deck of the ship.

R is a ring screwing upon the exterior of the bearing Q. It has holes R' in its periphery to receive a bar which is used in turning it.

SSS are disks which are squeezed together when the ring R is screwed down upon the bearing. Some of these rings are made to engage with the bearing, so that they cannot turn around it, while the other alternate rings are engaged in a similar way with the worm-wheel and cannot turn independently of it. Thus when the ring is screwed down the worm-wheel is made fast with the pivot, but when it is unscrewed (so as to relieve the pressure) the worm-wheel can turn on the pivot and then the gun can be trained quite independently of the training-gear above described, and merely by thrusting the breech end to one side or the other, as required, by means of a shoulder-piece, which may be provided.

B' is the upper cylindrical pivot on the cross-bar B.

T is the globular brass, into which it is received, and this is held in a corresponding bearing, U, firmly attached to the ship's side, as the drawings indicate.

V V are the doors to close the port-hole. To admit of this being done, the gun is unshipped by means of gear provided for the purpose, but which forms no part of the invention to be secured by the present patent, and so is not indicated in these drawings.

I claim—

1. The combination, substantially as here-inbefore set forth, of the semi-cylindrical armor plate or shield, the top and bottom cross-pieces secured thereto, the vertical pivots connected to said cross-pieces, the gun, the cradle in which it is mounted, and the horizontal pivots or trunnions of the gun supported in bearings in the armor plate or shield.

2. The combination, substantially as here-inbefore set forth, of the semi-cylindrical armor plate or shield open at the rear, the gun, its cradle, the recoil-cylinder, carried by the cradle beneath the gun, and the gear for raising and lowering the gun, cradle, and recoil-cylinder together or simultaneously.

3. The combination, substantially as here-inbefore set forth, of the semi-cylindrical armor plate or shield open at the rear, the top and bottom cross-pieces secured thereon, the vertical pivots of the shield connected with said cross-pieces, the gun, the cradle in which it is mounted, the horizontal pivots or trunnions of the gun supported in bearings in the armor plate or shield, the gear for raising and lowering the gun and cradle and recoil-cylinder together, and the training-gear engaging with the armor plate or shield for training or moving the shield on its vertical pivots.

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Witnesses:

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