

(No Model.)

A. M. MENTZER.
HORSE DETACHER.

2 Sheets—Sheet 1.

No. 505,056.

Patented Sept. 12, 1893.

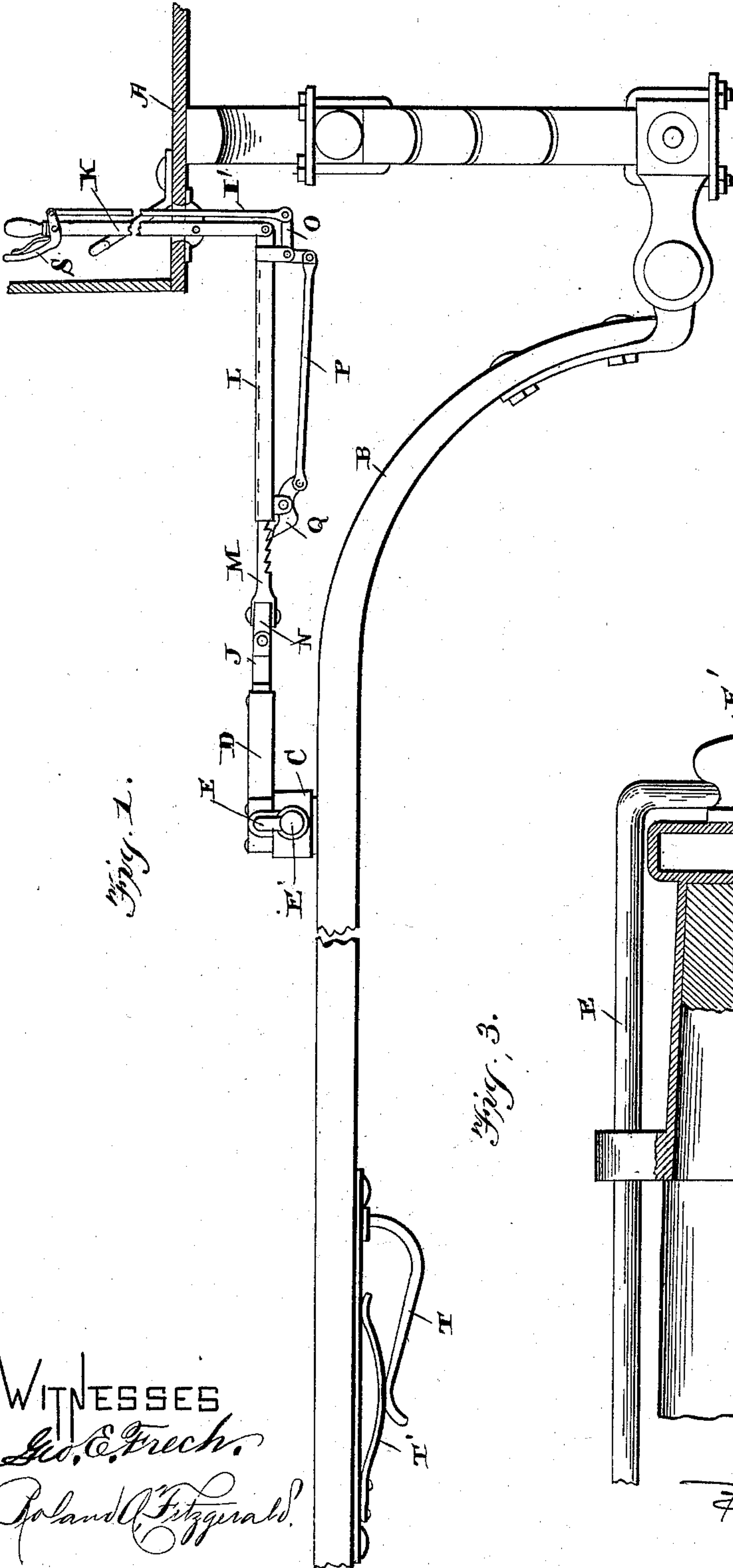


Fig. 1.

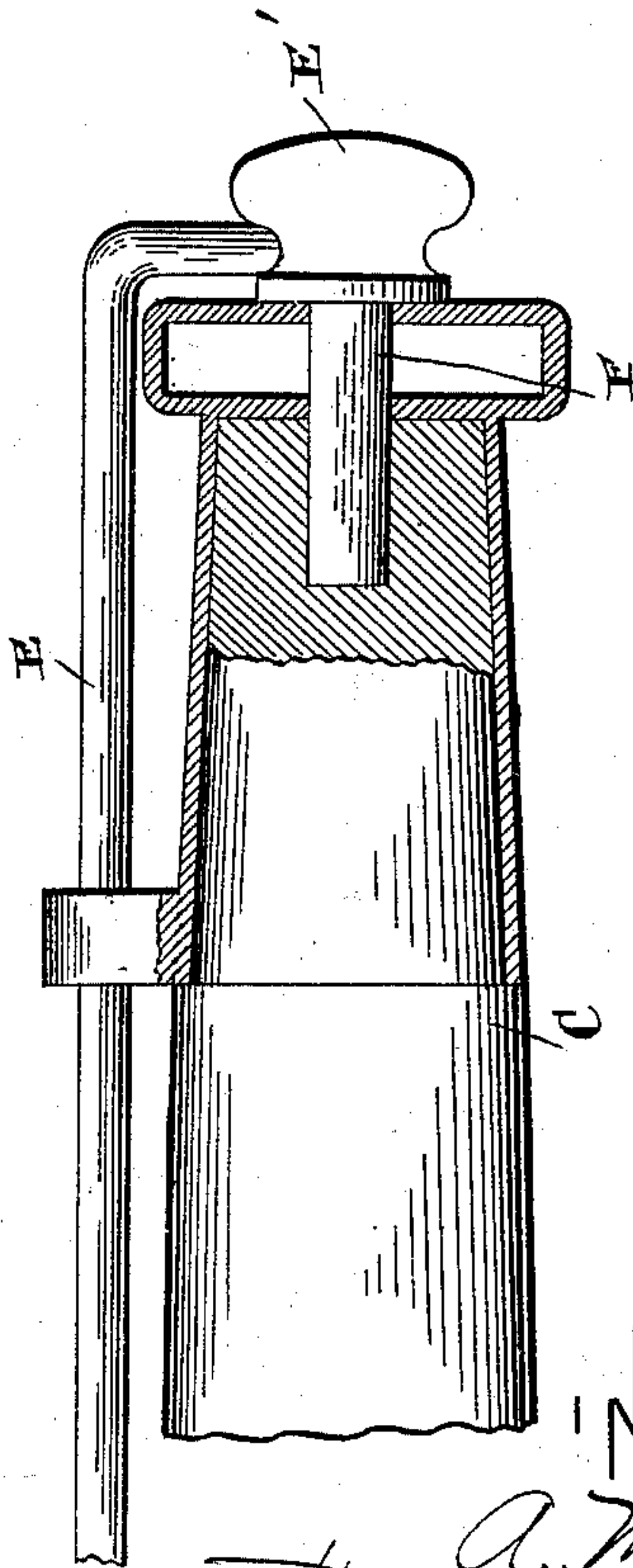


Fig. 3.

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HORSE DETACHER.

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Fig. 2.

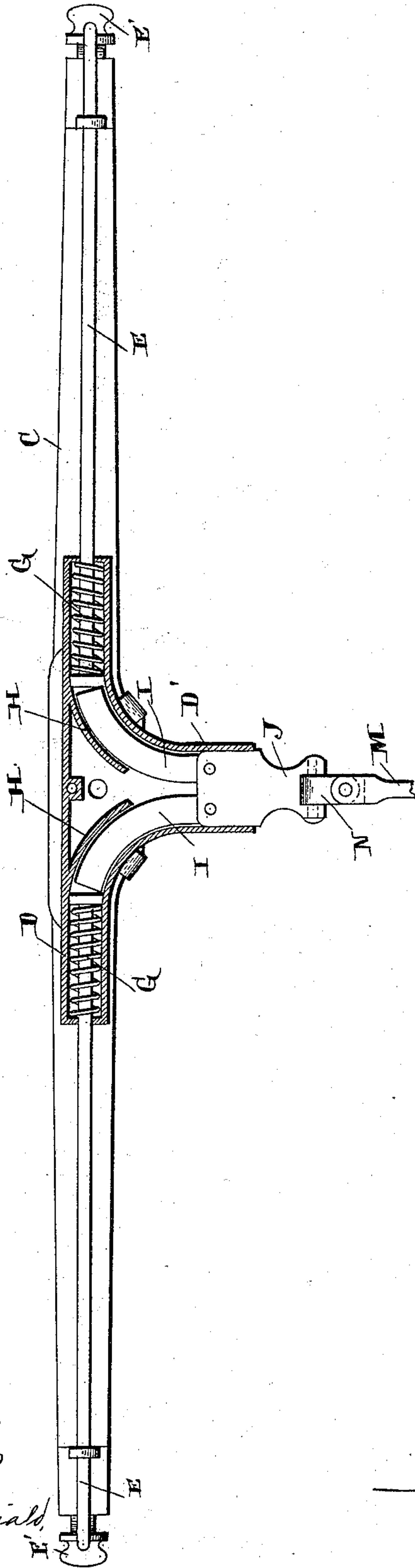
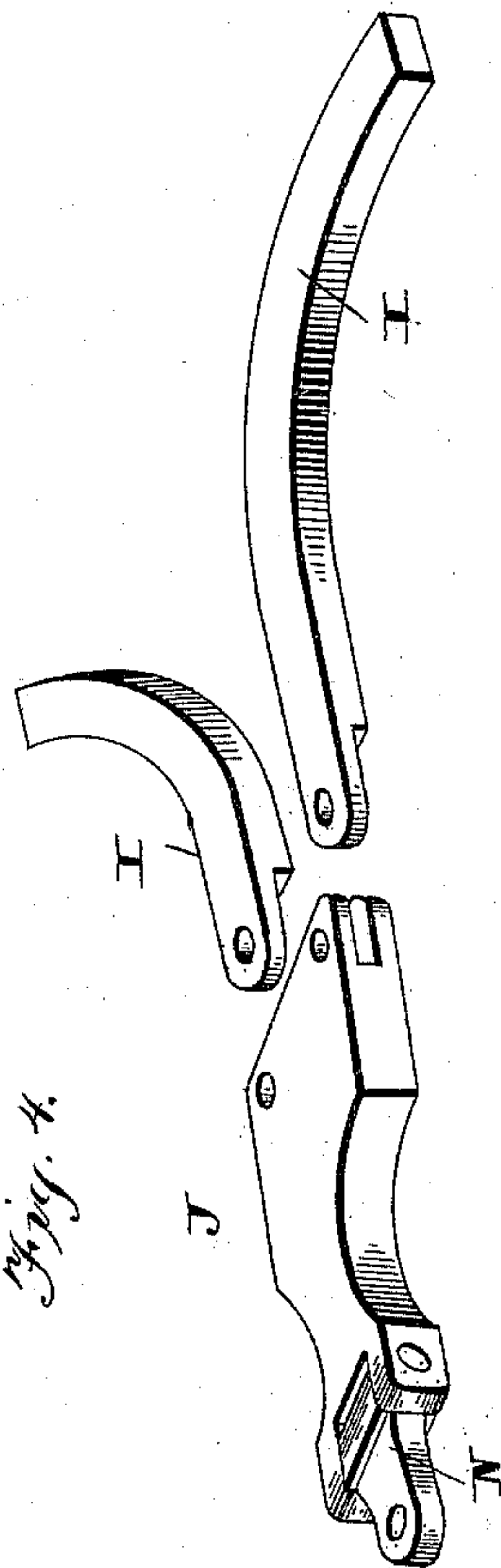


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALONZO M. MENTZER, OF ANDREWS, INDIANA, ASSIGNOR OF ONE-HALF TO
JOHN B. HALLER, OF SAME PLACE.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 505,056, dated September 12, 1893.

Application filed May 24, 1893. Serial No. 475,322. (No model.)

To all whom it may concern:

Be it known that I, ALONZO M. MENTZER, of Andrews, in the county of Huntington and State of Indiana, have invented certain new and useful Improvements in Horse-Detachers; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in horse detachers, and it consists in the novel features of construction hereinafter fully described and especially designated in the claims.

The object of my invention is to provide an improved device for detaching instantly the horse from a vehicle to which he is hitched by the movement of a lever in the hands of the driver, and which device is thoroughly effective in its operation no matter what position the thill may occupy in relation to the vehicle body.

Referring to the accompanying drawings: Figure 1, is a side elevation of the front portion of a vehicle having my improved device applied thereto. Fig. 2, is a plan view of the same, a portion of the casing which incloses the detaching mechanism being broken away. Fig. 3, is a side elevation of one of the single tree tips. Fig. 4, is a detached view of the curved bars and head to which they are secured.

A designates the vehicle bottom, B the thill, and C the single tree. Secured to the upper side of the single tree is the triangular casing D and extended thereinto are the headed rods E which at their outer ends are secured to and move longitudinally the bolt F which secure the trace ends to the single tree. Coiled about the inner ends of the rods E within the casing are the springs G which serve to hold the rods normally drawn inward with the bolts F extended into their sockets for the purpose of holding the traces. Extended inward from the ends of casing D, are the curved and converging guide-ways H which merge into the branch or angle D' of the casing. Movable longitudinally in the guide-

ways H are the curved bars I which bear against the inner ends of rods E and which at their inner ends are connected to the head J movable in passage D' of the casing. Thus by moving the said head into the channel the curved bars will be forced outward pushing rods E in the same direction against the pressure of springs G, and drawing outward bolts F from their sockets, thus releasing the trace ends. For effecting this movement of the head J and curved bars I, pivotally connected thereto, I provide the lever K which is fulcrumed between its ends to the vehicle floor as shown, and pivotally secured to the lower end of this lever is the tubular arm L, into which extends rod M which latter is pivoted at its outer end to link N having a pivotal connection with head J. By this arrangement it will be seen that the single tree of casing D may assume any lateral angle or position without effecting the said rod. The rod being movable in the said tubular arm allows the same to respond to the various vertical positions of the single-tree and thill by longitudinal movement without becoming disengaged. Pivotally mounted below the inner end of arm L is the bell crank lever O which is connected by rod P as shown to one end of the angular dog Q, which latter is pivotally secured near the outer end of said arm. Thus when the said rod is moved outward longitudinally the said dog is turned upward into engagement with the serrated edge of rod M, and by this means the rod and arm L are made rigid. The adjustment of lever O for effecting this movement of the dog is secured by the depending rod I', connected as shown to the spring actuated latch S at the upper end of lever K. Thus when it is desired to operate the detacher the said latch is grasped by the operator and thrown inward against the lever end, which effects a rigid connection between the rod M and arm L, so that by drawing the upper end of said lever rearward its lower end is pushed forward along with arm L, and the head J and curved bars I consequently forced into casing D, thus effecting an outward movement of rod E with the result that the traces are detached, as before described.

By means of the several joints connecting

the various parts of the detaching mechanism, it will be seen that ample provision is made for any and all play or movement of the single tree or thill with relation to the vehicle body.

The detaching operation is effected instantly and is obtained by a simple and positive movement of the lever. A hook T is secured to the under side of the thill to which is connected the hold back strap, and arranged immediately over the outer end of the hook is the compressible spring T', so that when the horse is moving forward from the shafts after having been detached the strap will automatically disengage the said hook, as will be readily understood, while at the same time the spring is sufficiently strong to prevent disengagement under normal conditions. The outer ends of rods E are provided with knobs E', so that the same may be conveniently drawn outward along with bolt F, for the purpose of attaching the traces.

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

1. An improved horse detacher comprising a casing, curved and converging guide-ways formed therein, longitudinally movable trace releasing rods, curved bars movable in said guideways for operating the rods, and a movable head to which said bars are connected, substantially as shown and described.

2. In a horse detacher, the combination of

a horse releasing mechanism, a longitudinally movable head for operating the same, a rearwardly extending rod, a hollow arm in which the said rod moves, a means for adjusting the arm, and a means for locking the said arm and rod together, substantially as shown and described.

3. In a horse detacher the combination of a trace releasing mechanism, a head for operating said mechanism, a rod leading rearward from the head, a hollow arm in which the said rod moves, a means for locking the said arm and rod together, and an operating lever to which the inner end of the said arm is connected, substantially as shown and described.

4. In a horse detacher, the combination of a trace releasing mechanism, a rod for operating the said mechanism, a hollow arm in which the said rod moves, a dog pivoted to the arm for engaging the rod and holding it rigid therewith, a lever connected to the arm for moving it longitudinally, a spring actuated latch adjacent the upper end of the lever, and a rod and lever connection between the said latch and dog for operating the latter, substantially as shown and described.

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

ALONZO M. MENTZER.

Witnesses:

JOHN B. HALLER,

J. H. MCCLURE.