

(No Model.)

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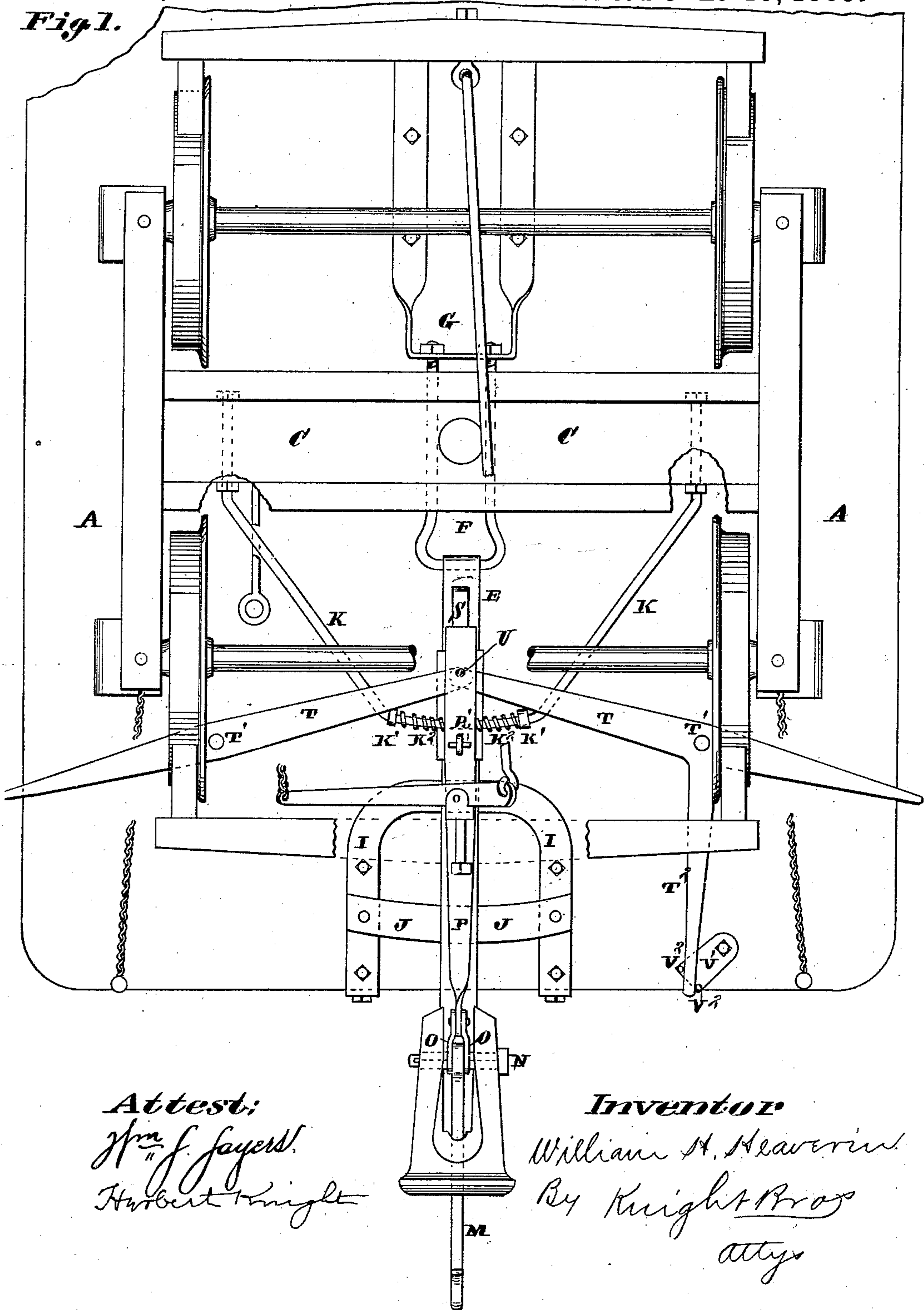
W. H. HEAVERIN.

CAR COUPLING.

No. 279,752.

Patented June 19, 1883.

*Fig 1.*



*Attest:*

*Jas. f. Jager.*  
*Herbert Knight*

*Inventor*

*William H. Heaverin*  
*By Knight Bros*  
*attys*

(No Model.)

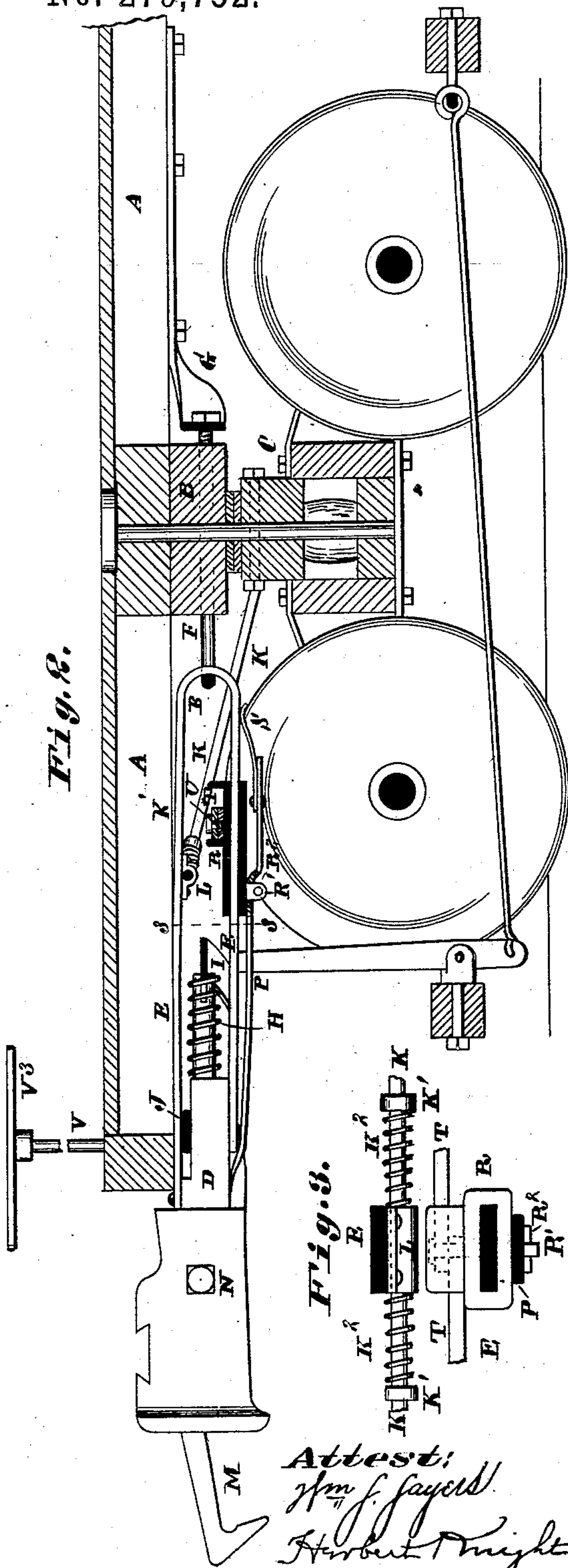
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W. H. HEAVERIN.

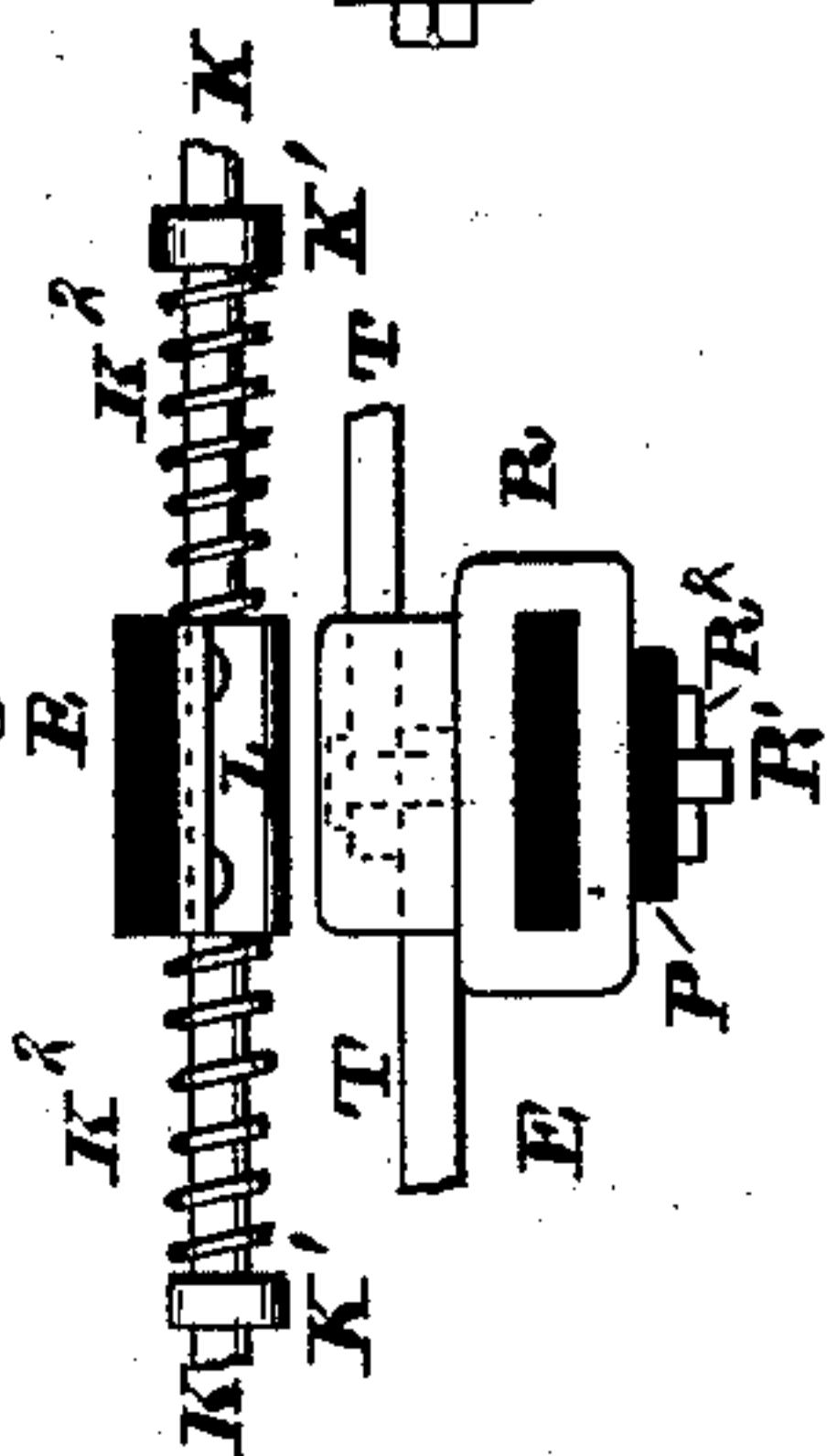
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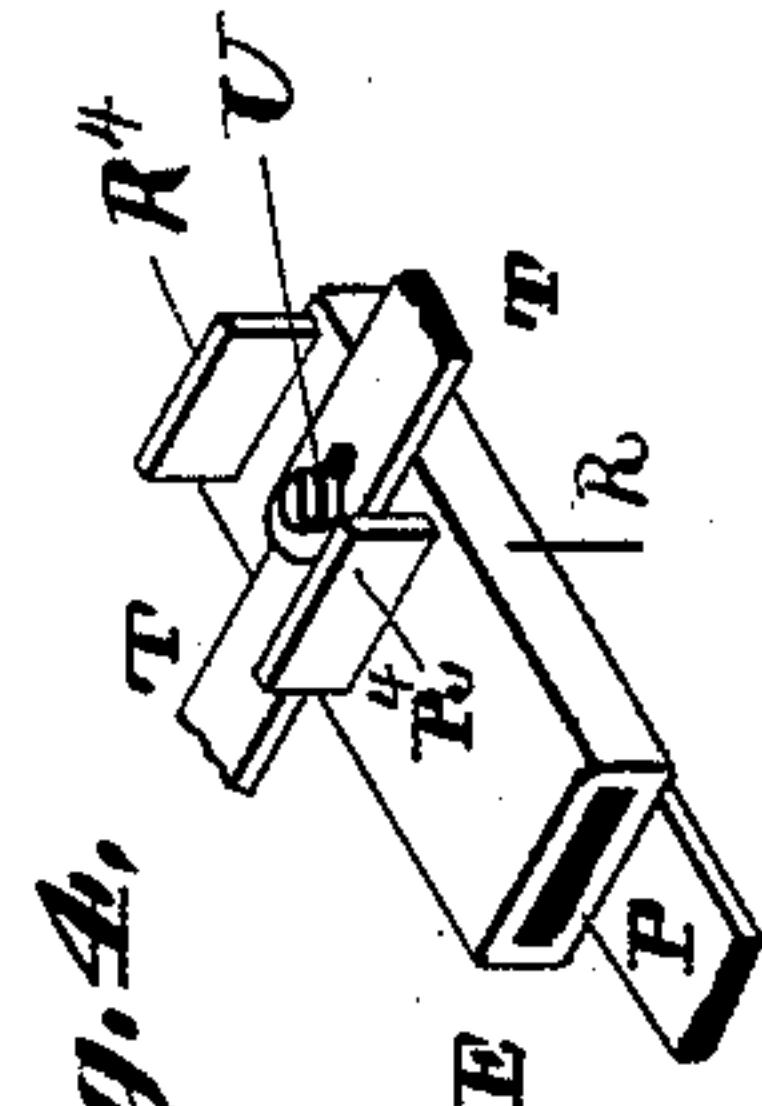
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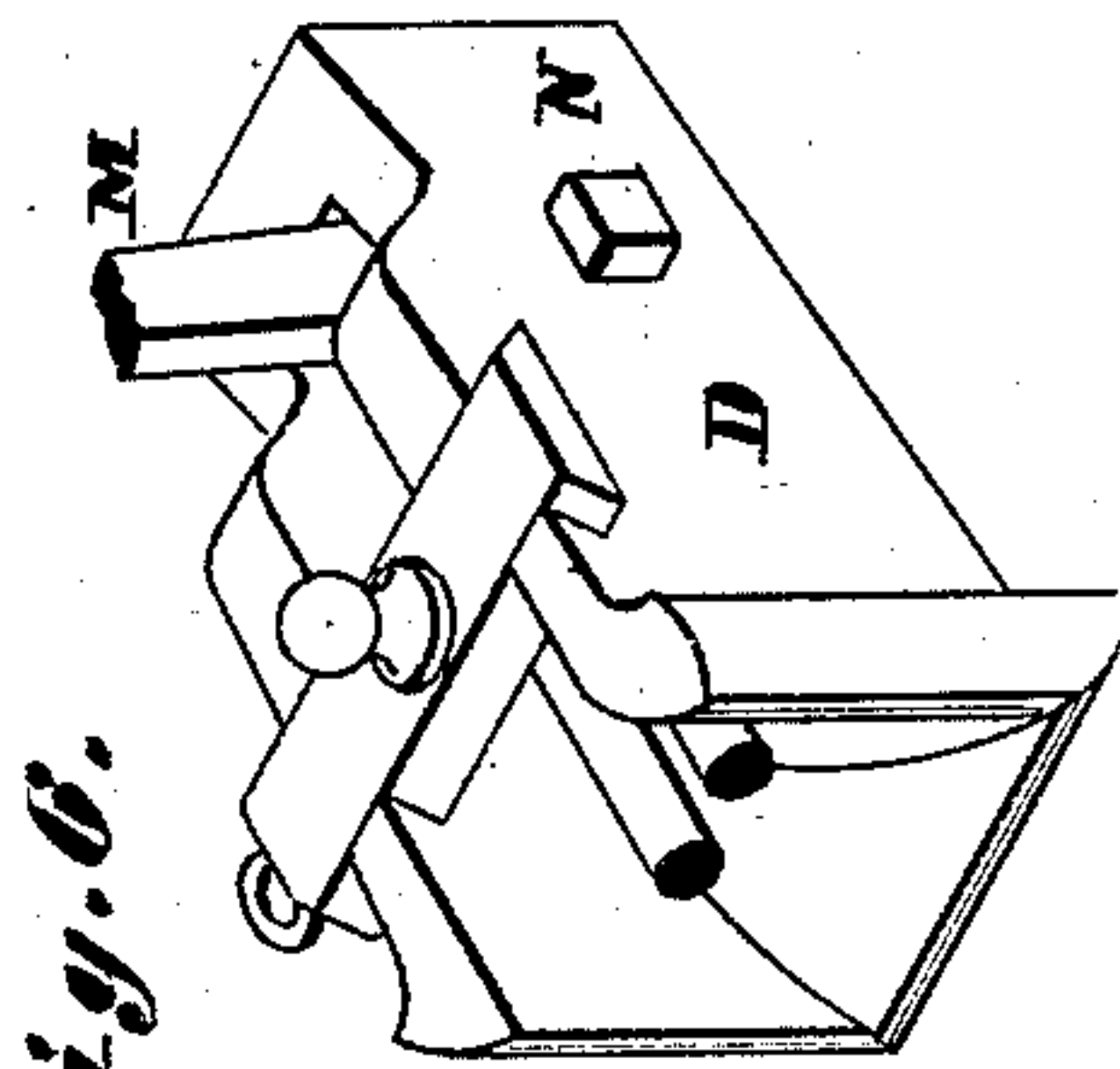
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

WILLIAM H. HEAVERIN, OF ST. LOUIS, MO., ASSIGNOR OF FIVE-EIGHTHS TO  
WILLIAM H. CALVERT AND WILLIAM S. BURROUGHS, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 279,752, dated June 19, 1883.

Application filed March 16, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. HEAVERIN, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

10 Figure 1 is a bottom view of one end of a car with my improvement applied. Fig. 2 is an axial longitudinal vertical section of same. Fig. 3 is a vertical transverse section taken on line 3 3, Fig. 2. Fig. 4 is a detail perspective view. Fig. 5 is a vertical longitudinal section of the ends of two draw-bars, showing the hook of one raised and that of the other down. Fig. 6 is a perspective view of the end of one of the draw-bars, showing the manner in which a common coupling-pin can be used; but this feature, as well as the general construction of the draw-heads and the shape of the hooks, is the same in this application as in the patent granted to myself and William H. Calvert, October 24, 1882, No. 266,472, so they will require no further description here.

My present invention relates to certain points of novelty hereinafter fully described, and pointed out in the claims.

30 Referring to the drawings, A represents part of the body of a car; B, the bolster, and C the truck.

D represents the draw-bar, connected by means of a strap, E, to a clevis, F, secured to the bottom of the car by passing through the bolster, and by means of a bracket, G; or it may be made fast in any suitable way. The outer end of the draw-bar is thus free for lateral movement. The inner part of the draw-bar is reduced and is surrounded by a spring, H.

40 I represents a U-shaped plate, (see Fig. 1,) or a plate of other shape, secured to the bottom of the car, and the rear end of the draw-bar engages this plate by means of its slitted end. (See Fig. 2.) The spring H has bearing between this plate and the shoulder of the draw-bar, (see Fig. 2,) and thus holds the draw-bar in its outer position, except when forced back. The outer end of the draw-bar is sustained by a plate, J, which passes un-

der the upper part of the strap E, (see Fig. 2,) and is secured to the bottom of the car. (See Fig. 1.)

K K are brace-rods connecting the strap E (or they may connect with the draw-bar) with the truck. (See Figs. 1 and 2.) I prefer to make these rods in a single piece, (see Fig. 1,) which passes through a box, L, secured to the under side of the upper part of the strap, (see Figs. 2 and 3,) and I prefer to place spiral springs K<sup>2</sup> between the strap on each side, and collars K' on the rods, but the springs may be dispensed with and the rods rigidly secured to the strap. Now, it will be seen that when the truck turns by the car going around a curve the outer end of the draw-bar will be moved laterally by the rods or bars K, which is a great convenience in coupling cars on curves, as two adjacent draw-heads are bound to be in the proper relative position.

70 M represents the coupling-hook, pivoted in the head by a bolt, N. It is raised to uncouple the cars by a crank, O, consisting, preferably, of two links, (see Figs. 2 and 5,) on the bolt N, and connected by its lower end to a spring-strap, P. The crank is made fast to the hook, so as to raise it, by a small pin, Q, passing through the crank, and a notch, Q', in the lower end of the hook; or the connection may be made in any other suitable way. The pin or bolt N, I prefer to make round where it passes through the hook and crank, and square or non-circular where it passes through the draw-head. By forcing the lower end of the crank forward, by means of the strap P, the hook will be raised, and by pulling it back the hook will be lowered. The crank is connected to the strap by means of a pin that passes through a slot in the end of the strap. The object of the slot is to allow the draw-bar to be compressed or forced inward without having any effect on the hook or strap, the pin working in the slot. The strap extends back and is pivoted to the under side of a sliding plate, R, surrounding the under part of the strap E, the connection being made by means of a downwardly-extending lug, R', passing through a hole in the plate or strap P, with a transverse pin, R<sup>2</sup>, beneath the strap to support it. Secured to the rear end of the strap is



P is a spring, S, that acts to force the forward end of the strap upward, so that when the link or hook M is raised it will be held in its upper position by the strap pressing against the crank, the lower end of which is forward of the pin or bolt N. (See Fig. 5.)

The sliding plate R is moved back and forth by levers T, fulcrumed to the bottom of the car at T', and secured together by a bolt, U, passing through a slot in the end of one of the levers. (See Figs. 2 and 4.) The levers may extend out to the side of the car, as shown, and one of them may have a T-arm, T<sup>2</sup>, extending to the end of the car, and being operated by a plate, V', having pins V<sup>2</sup>, between which the end of the arm fits, on the lower end of a vertical rock-shaft, V, secured to the end of the car, and having a cross-bar, V<sup>3</sup>, on its upper end. (See Fig. 2.) The ends of the levers T work between upturned flanges R<sup>4</sup> of the plate R. (See Figs. 2 and 4.)

I claim as my invention—

1. In a railway-car, the combination of a draw-bar pivoted to the body of the car to permit the draw-bar to have lateral movement at its outer end, and brace-rods connecting the draw-bar to the truck, as set forth.

2. In a railway-car, the combination of a draw-bar pivoted to the body of the car to permit the draw-bar to have lateral movement at its outer end, brace-rods connecting the draw-bar to the truck, and springs interposed between the brace-rods and draw-bar, as set forth.

3. The combination of draw-bar D, strap E,

clevis F, body A, truck C, and braces K, connecting the truck and strap, substantially as and for the purpose set forth. 35

4. The combination of draw-bar D, strap E, clevis F, body A, truck C, braces K, having collars K', and connecting the truck and strap, and springs K<sup>2</sup>, interposed between the strap E and the collars K', all substantially as and for the purpose set forth. 40

5. The combination of draw-bar D, strap E, clevis F, body A, truck C, braces K, connecting the truck and strap, plates I and J, and spring H, all substantially as set forth. 45

6. In combination with the draw-bar D, hook M, and plate P, the crank O, connecting with the plate by a pin passing through a slot in the plate and with the hook by the pin N, and the small pin Q, passing through a slot in the hook, substantially as set forth. 50

7. The combination of draw-bar D, hook M, crank O, plate P, strap E, sliding plate R, to which the plate P is connected, and lever or levers T, substantially as and for the purpose set forth. 55

8. The combination of draw-bar D, hook M, crank O, plate P, strap E, sliding plate R, to which the plate P is connected, levers T, arm T<sup>2</sup>, plate V', having pins V<sup>2</sup>, rock-shaft V, and cross-bar V<sup>3</sup>, all substantially as and for the purpose set forth. 60

WILLIAM H. HEAVERIN.

In presence of—

SAML. KNIGHT,

GEO. H. KNIGHT.