2 Sheets—Sheet 1.

G. M. THOMPSON.

CAR-COUPLING.

No. 190,931. Patented May 15, 1877.

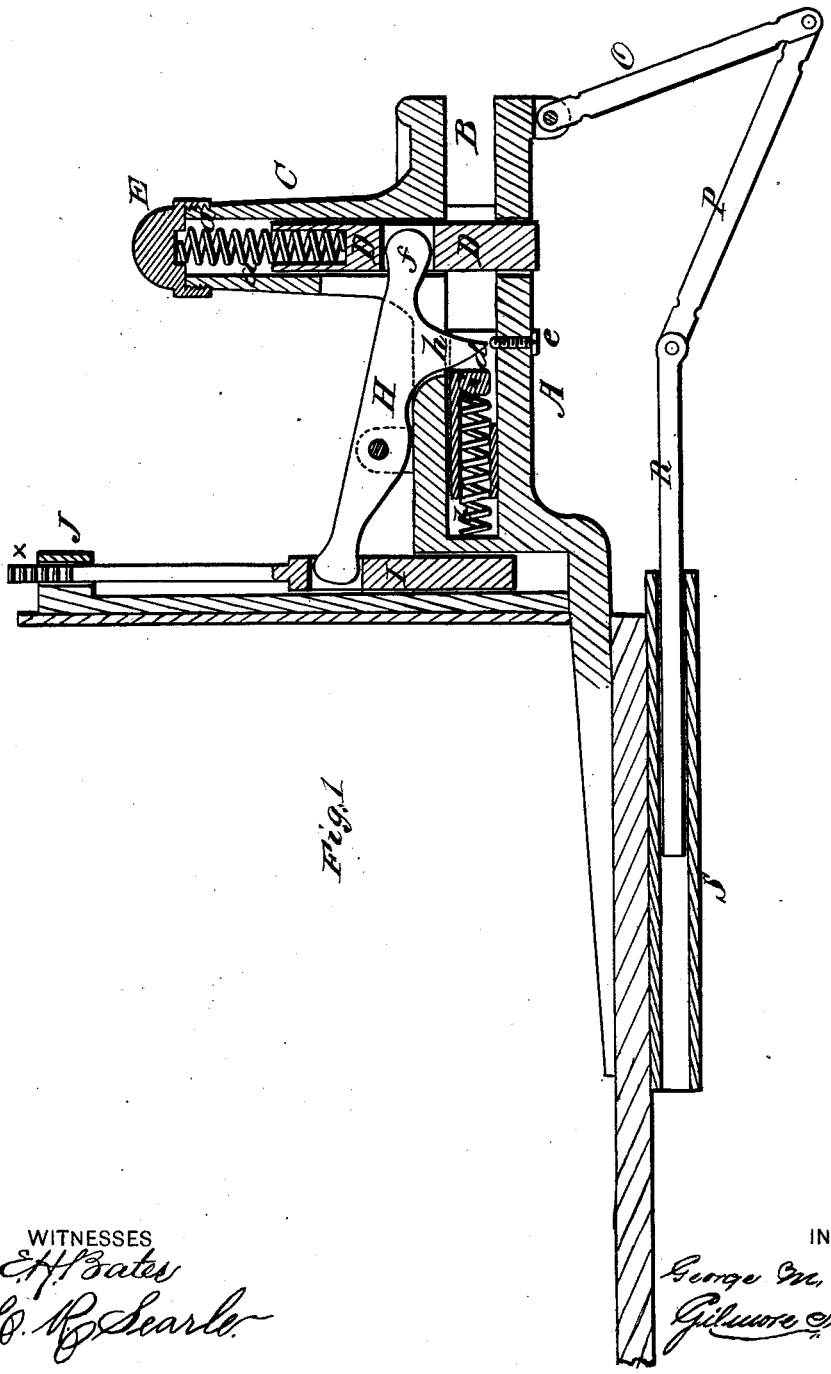

Fig. 1.

WITNESSES

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2 Sheets—Sheet 2.

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Fig. 2.

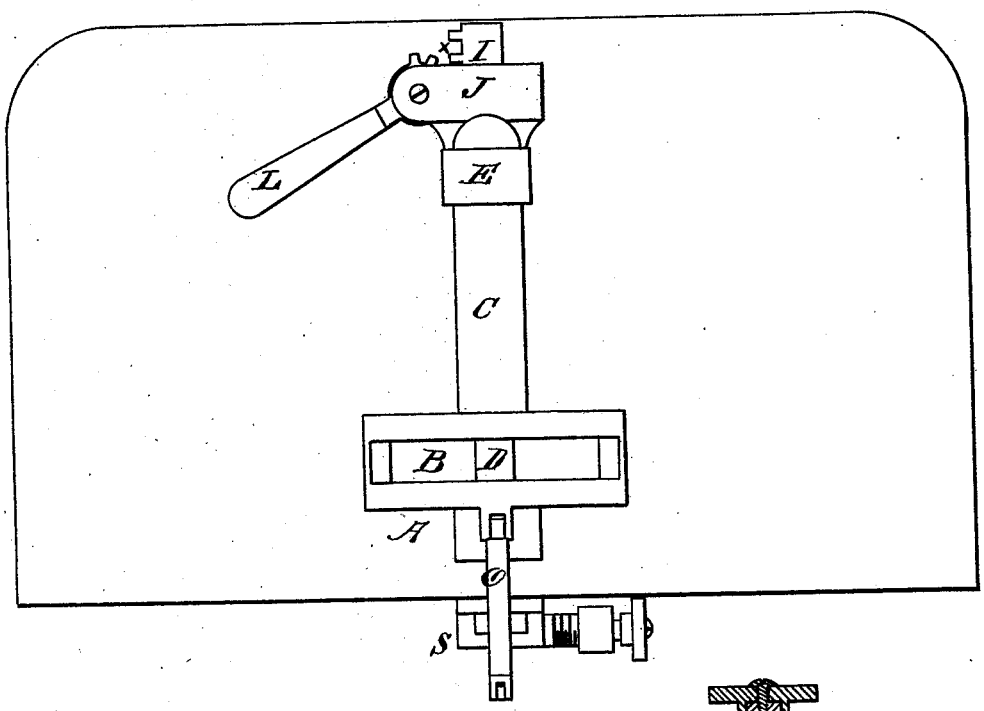
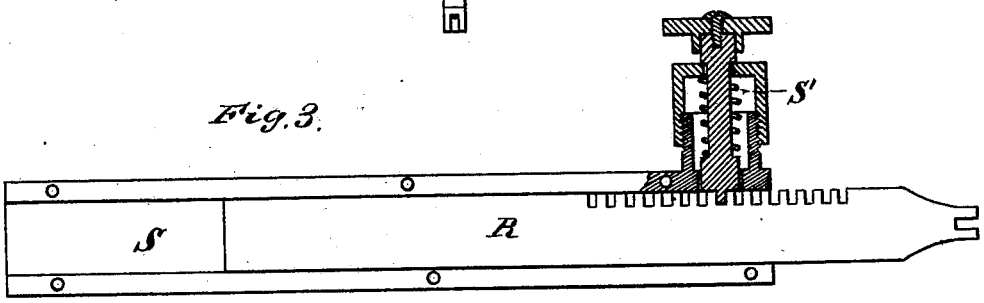


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE M. THOMPSON, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **190,931**, dated May 15, 1877; application filed May 1, 1877.

To all whom it may concern:

Be it known that I, GEORGE M. THOMPSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and valuable Improvement in Couplings for Horse-Cars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my coupler, and Fig. 2 is a plan view of the same. Fig. 3 is a sectional detail view thereof.

The nature of my invention consists in the construction and arrangement of a coupling for horse-cars, as will be hereinafter more fully set forth.

In the annexed drawing, A represents the draw-bar, secured in any suitable manner to the frame of the car, and provided at its front end with a circular draw-head, B, having a wide horizontal mouth leading to the interior chamber.

In the center of the draw-head B is formed a vertical tube, C, containing the coupling-pin D, which is pressed downward by means of a spring, *a*. The top of the tube C is closed by a screw-cap, E, as shown.

In the draw-bar A is placed a horizontal slide, G, which is pressed forward by a spring, *b*, behind it. This slide has a vertical slot, *d*, in its forward end, as shown; and its forward movement is limited by means of a pin or screw, E, entering a slot or groove in its under side.

Between two ears on the top of the draw-bar A is pivoted a lever, H, the front end of which forms a straight arm, *f*, and a downwardly-bent arm, *h*.

The former arm passes through a slot in the tube C into a slot or mortise in the coupling-pin D, while the bent arm *h* passes downward through a slot in the top of the draw-head B.

The rear end of the lever H is inserted in a mortise in a vertical slide, I, moving in the rear part of the draw-bar, and extending upward for a suitable distance, and having cogs *x* formed on one side at its upper end. This part of the slide I is held in a keeper, J, in which is pivoted a lever, L, having its inner end enlarged and cogged to engage with the cogs *x*.

When the car is uncoupled the pin D is raised, and the slide G moved forward under the lower end of the pin to support the same.

When the coupling-iron is inserted in the head B, the slide G is thereby forced backward, allowing the spring *a* to throw the pin D downward to couple the car. At the same time, and with or by the pin, the front end of the lever H is turned downward, so that its prong *h* will pass into the slot *d* in the front end of the slide G, thus holding the same back, so as not to interfere with the coupling-iron.

To uncouple the car, it is only necessary to raise the lever L, when, by means of the rack-slide I, the pin D is raised, and at the same time the slide G released, so as to be thrown forward by its spring *b*, to expel the coupling-iron and take its place under the pin.

Under the front of the draw-head B is hinged a rod, O, which, by another hinged rod, P, is connected with a rack-slide, R, placed in a case, S, under the car. This slide is moved out and in as required, and held at any point desired, by a spring-pawl, S′.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the coupling-pin D placed in a tube, C, and actuated by a spring, *a*, of the pivoted lever H, with straight arm or prong *f*, the rack-slide I, and cogged lever L, substantially as and for the purposes set forth.

2. The slide G actuated by the spring *b*, and provided with the slot *d* in its front end, in combination with the prong *h* on the lever H, for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEO. M. THOMPSON.

Witnesses:
H. F. BUSWELL,
CHARLES H. WALCOTT.