

(No Model.)

A. C. HALL.
CAR COUPLING.

No. 465,663.

Patented Dec. 22, 1891.

Fig. 1

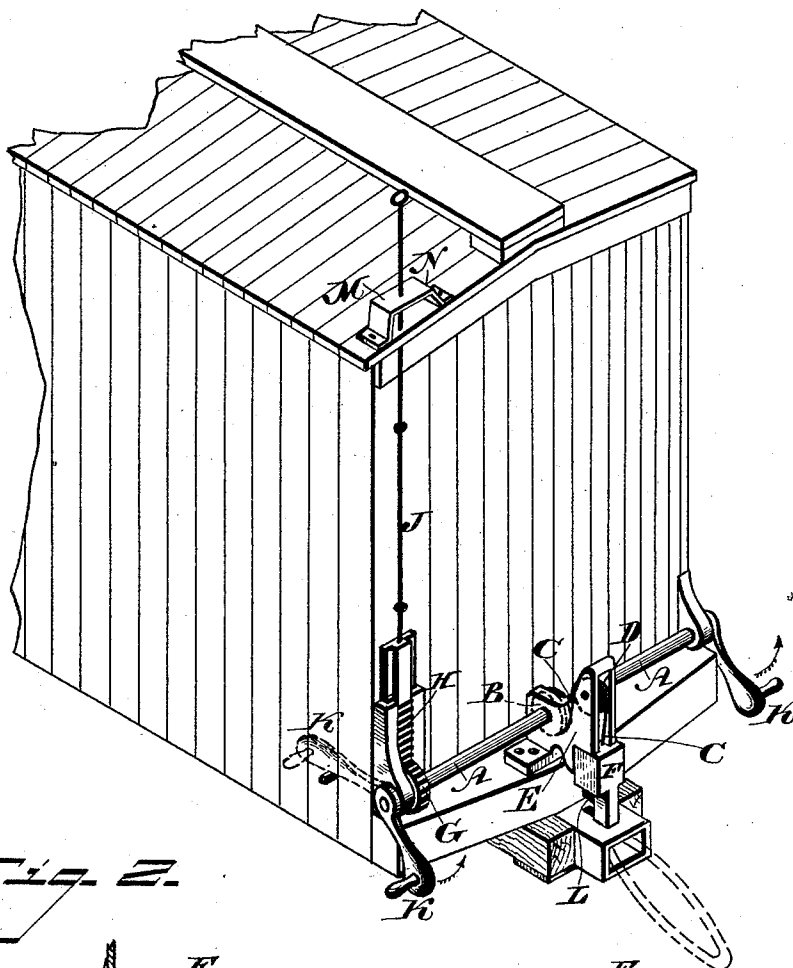
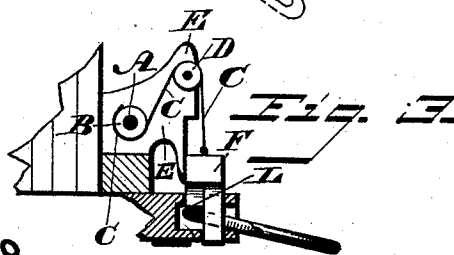
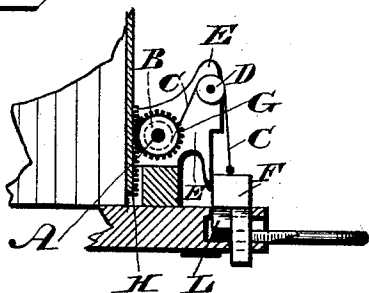


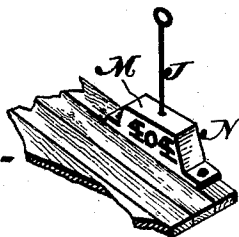
Fig. 2



WITNESSES:

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Fig. 4



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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 465,663, dated December 22, 1891.

Application filed June 24, 1891. Serial No. 397,274. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. HALL, a citizen of the United States, residing at Hazel, in the county of Hamlin and State of South Dakota, have invented a new and useful Improvement in Car-Couplings, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a car-coupling provided with novel means for safely and conveniently operating the coupling-link from the side or top of the car, as will be hereinafter fully described and definitely claimed.

It also consists in so constructing the coupling-pin that the link may be set at different angles relatively to the varying heights of draw-heads.

It also consists of other novel features, as will be fully pointed out.

Figure 1 represents a perspective view of a car-coupling embodying my invention. Figs. 2 and 3 represent vertical sections of detached parts. Fig. 4 represents a view of a guard and numbering piece at the top of the car.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a shaft which is suitably mounted on the end of the car and carrying a grooved pulley B, around which passes a cord or chain C, the latter also passing around a pulley D, which is mounted on a bracket E, projecting from the end of the car.

F designates a coupling-pin, which is connected with the chain C and adapted to enter the coupling-link, as usual in such cases.

Keyed or otherwise secured to the shaft A is a pinion G, which meshes with a rack H, which is vertically guided on the end of the car, and having at its upper end a handle-rod or piece J, which is conveniently reached at the top of the car. On the ends of the shaft A are cranks K, which are conveniently accessible at the side of the car.

The operation is as follows: Either crank is rotated, whereby the shaft A, and consequently the pulley B, receives motion, and the chain C is wound on said pulley, thus causing the elevation of the coupling-pin. The link may now enter the draw-head, when the crank is rotated in reverse direction, thus permitting

the chain C to unwind from the pulley B, and the coupling-pin accordingly descends and enters the link. Should it be desired to couple or uncouple from the top of the car the piece J is raised, thus operating the rack H and rotating the pinion G, and consequently the shaft A, thus causing the elevation of the coupling-pin. When the rack is lowered the pin is permitted to descend, by which means the coupling and uncoupling are effected. The coupling-pin is provided with a shoulder L below the head thereof, the same being adapted to bear against the bend or end of the coupling-link and thus retain the link in position to enter the opposite draw-head, if of the same height. Should, however, the height be less, the pin is raised so as to relieve the link of said shoulder, when the link may be set in a different angle and thus be accommodated to the height of the opposite draw-head. The coupling-pin and the opening in the draw-head through which it passes are made square or angular so as to prevent rotation of the former, and thus the shoulder always retains the proper position. The upper part of the handle rod or piece J passes through a flange M of a guard-piece N, said piece rising above the top of the car and serving to prevent the feet of a brakeman from slipping forward, it also providing convenient means for numbering the car at the top thereof.

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

1. A car-coupling consisting of a rotatable shaft with a pulley thereon, a guide-pulley, a cord or chain connected with said pulleys, a coupling-pin secured to said chain, a pinion on said shaft, and mechanism on said car for rotating said pinion, said parts being combined substantially as described.

2. A shaft carrying a pulley and a pinion, said pulley having a flexible connection with the coupling-pin, and said pinion meshing with a rack which is mounted on the car and provided with a handle-piece accessible on the top of the car, substantially as described.

3. A coupling-pin, a cord or chain connected therewith, and a pulley with which said cord or chain is connected, in combination with a shaft which is mounted on the car and

carrying said pulley and provided with a pinion and a crank, said pinion meshing with a rack mounted on the car, whereby the coupling-pin may be operated from the side or top
5 of the car, substantially as described.

4. An operating rod or piece J of a car-coupling, in combination with a guard at the top

of the car, the said rod passing through a flange of said guard, substantially as described.

ARTHUR C. HALL.

Witnesses:

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