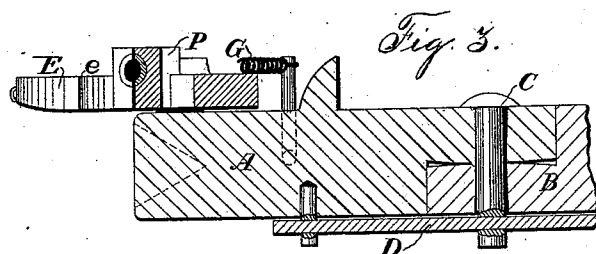
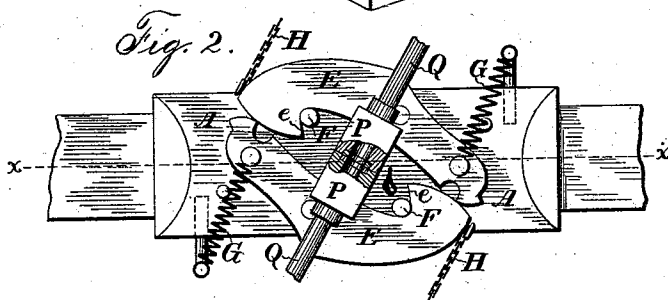
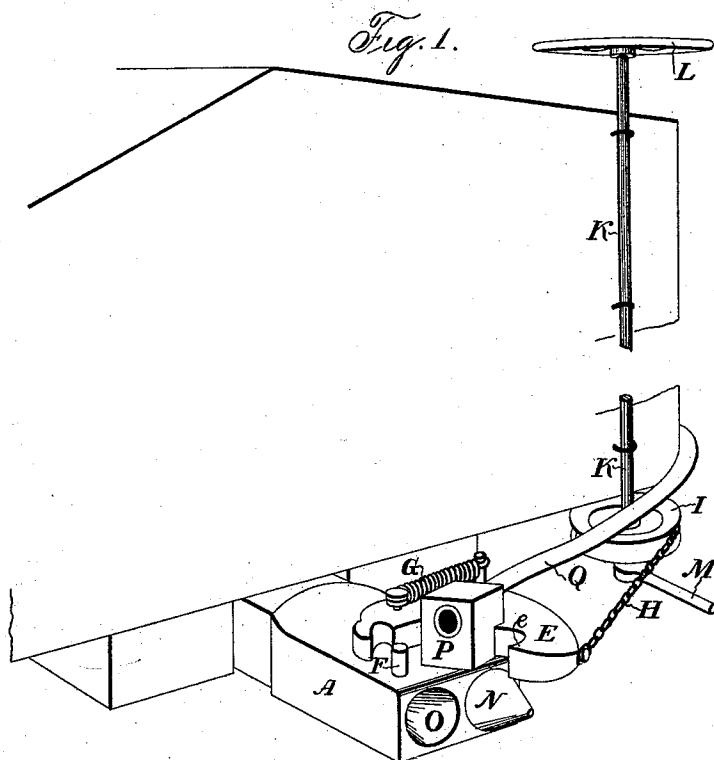


(No Model.)

O. L. LECOMPTE.
AUTOMATIC CAR AND AIR BRAKE COUPLING.

No. 554,521.

Patented Feb. 11, 1896.



Witnesses
Frank P. Prindle.
Henry C. Hazard

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UNITED STATES PATENT OFFICE.

O'LESIME LECOMPTE, OF AURORA, ILLINOIS.

AUTOMATIC CAR AND AIR-BRAKE COUPLING.

SPECIFICATION forming part of Letters Patent No. 554,521, dated February 11, 1896.

Application filed October 17, 1895. Serial No. 565,974. (No model.)

To all whom it may concern:

Be it known that I, O'LESIME LECOMPTE, of Aurora, in the county of Kane, and in the State of Illinois, have invented certain new and useful Improvements in Automatic Car and Air-Brake Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the end of a car provided with my invention. Fig. 2 is a plan view of two couplings united; and Fig. 3 is a longitudinal section of one coupling.

Letters of like name and kind refer to like parts in the several figures.

The object of my invention is to provide a coupling for cars that besides being a simple, efficient, and automatic car-coupling will enable the air-brake or other hose to be automatically coupled, whereby the necessity of men going between the cars for this purpose may be obviated, and the operation of coupling be more rapidly and cheaply done by reason of the dispensing with the necessity for the employment of men for the work; and to such end said invention consists in the car and pipe or hose coupling having the construction and combination of parts substantially as hereinafter specified.

In the carrying of my invention into practice I employ a draw-head A in the form of a substantially oblong metal block that is pivoted at its rear end to the front end of a draw-bar B, suitably attached to the under side of a car. The pivotal connection between the draw-head and draw-bar is a vertical pin or bolt C, that passes through overlapping projections on said parts, which permits limited horizontal swing of the draw-head, while to allow slight vertical play the abutting faces of said projections are curved convexly and the pin or bolt holes thereof made tapering. A spring-bar D, secured to the under side of both draw-head and draw-bar, holds said parts normally in line with each other.

Pivoted preferably to the upper side of the draw-head is a curved bar E, having its outer end pointed or beveled and provided with a shoulder e to constitute a hook or latch to engage a vertical stud or projection F upon the upper side of the draw-head of an adjoining car, as clearly shown in Fig. 2. To the rear

end or tail of the latch-bar is connected one end of a coiled spring G, whose other end is attached to the draw-head, which spring operates normally to swing and hold the latch-bar in engagement with its co-operating stud F. Connected to the other end of the latch-bar is one end of a chain or rope H, whose other end is attached to a drum or wheel I upon a vertical shaft K placed near one side of the car, and which may be revolved to cause the disengagement of the latch-bar from its stud by means of a hand-wheel L, arranged at or near the car-roof, or by means of a hand-lever M, accessible to a person upon the ground, and extending preferably in a direction lengthwise of the car when the latch-bar and stud are engaged. By thus arranging the hand-lever objectionable projections from the car side are avoided.

To enable the swinging of one latch-bar to disengage it from its stud to effect the disengagement of the other latch-bar from its stud the tail end of each bar is arranged to rest against the inner beveled face of the outer end of the other bar of a connected car. Hence, when a latch-bar is moved by means of the rotation of its shaft K the tail thereof will move the other bar away from its stud, and thus both latch-bars will be simultaneously disengaged from their respective studs and the cars uncoupled.

The latch-bar is stopped from being moved too far when it is swung to uncouple by the striking of its tail against the stud F upon its own draw-head.

To insure the proper coupling of two cars when their draw-heads are at different heights I provide upon the outer end of the draw-head a conical projection N and within each end a conical recess O, said projection and recess being located equal distances on opposite sides of the transverse center of the draw-head and adapted the one to co-operate with the cavity in an opposing draw-head and the other with the projection thereof to bring the heads in alignment.

Upon the inner side of the latch-bar, slightly in advance of its pivot, there is a boss or projection P that is perforated horizontally by an obliquely-extending opening, and to the boss in line with the opening is secured the end of an air-brake or other hose Q. The ob-

lique direction of the opening avoids any necessity for bending the hose abruptly, and thus prolongs its life.

The outer vertical face of one boss P is adapted to abut against the like face of a boss of a connected coupling, when the two latch-bars couple two cars together, and thus connect the hose thereof together. Preferably said abutting face is perfectly flat, as by the employment of a suitable packing around the opening an air-tight joint can be effected by a flat face, but if desired it can be given some other shape.

It will be seen that the coupling of the hose is effected automatically and simultaneously with the coupling of the cars, and said hose are uncoupled by the same act that causes the uncoupling of the cars.

My invention is simple, yet thoroughly efficient. It can be readily and cheaply constructed and applied to cars. The air-brake coupling is effective and will neither leak air on straight runs or in rounding curves.

Having thus described my invention, what I claim is—

1. The combination of the draw-head, the latch-bar pivoted thereto, adapted to engage a projection on a companion coupling, and having a part to engage the similar latch-bar of the other coupling, whereby when one latch-bar is moved to effect its disengagement, the other will be moved and a hose-coupling carried by the latch-bar, substantially as and for the purpose specified.

2. The combination of the draw-head, the latch-bar pivoted thereto, a pin or stud on

said head to be engaged by the latch-bar of a similar coupling, a spring to move said latch-bar in one direction, means to move it in an opposite direction, and a hose-coupling carried by said latch-bar, substantially as and for the purpose described.

3. The combination of the draw-head, the latch-bar pivoted thereto, a pin or stud on said head to be engaged by the latch-bar of a similar coupling, a spring to move said latch-bar in one direction, means to move it in an opposite direction, a hose-coupling carried by said latch-bar, the tail of one latch-bar being arranged to engage the outer end of the bar of a similar coupling, substantially as and for the purpose set forth.

4. The combination of the draw-head having a projection upon and a cavity in its outer end, a latch-bar pivoted to the upper side thereof, a stud on the draw-head to be engaged by the latch-bar of a similar coupling, a spring connected to the tail of the latch-bar, a boss on the inner side of the latch-bar having an opening, a hose secured to such boss, a shaft connected with the latch-bar, and means to rotate the shaft, the tail of one latch-bar being arranged to engage the outer end of the bar of a similar coupling, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of October, 1895.

O'LESIME LECOMPTE.

Witnesses:

E. T. PRINDLE,
A. C. LITTLE.