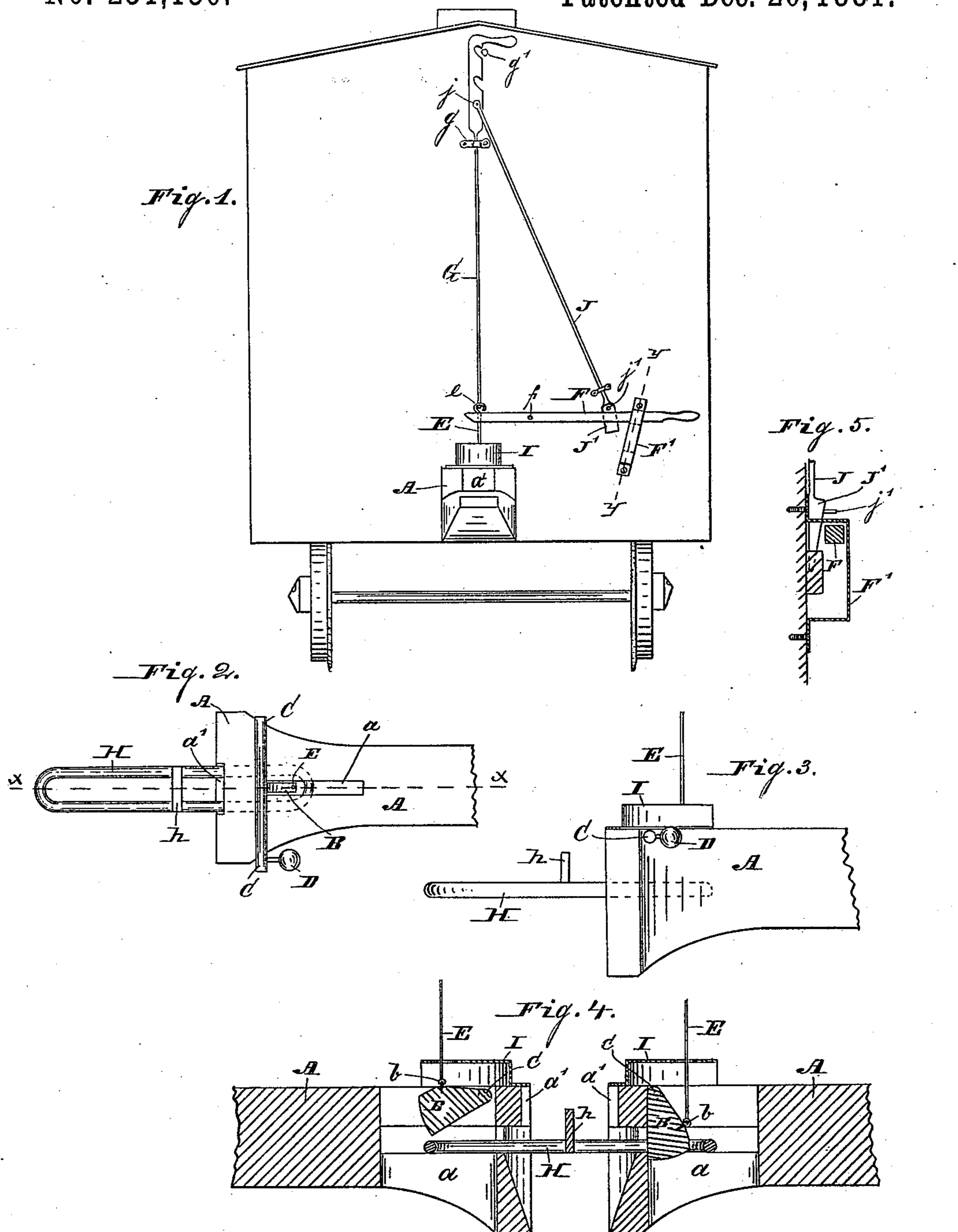


(No Model.)

J. S. OWEN.
CAR COUPLING.

No. 251,130.

Patented Dec. 20, 1881.



WITNESSES.

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JOHN S. OWEN, OF NORTH INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-THIRD TO GEORGE L. SNIDER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 251,130, dated December 20, 1881.

Application filed November 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. OWEN, of the town of North Indianapolis, county of Marion and State of Indiana, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

The object of my said invention is to produce a coupling for railway-cars (more especially freight-cars) that shall be capable of operating automatically to connect the cars together, and at the same time adapted to be manipulated by the train-men without their having to go between them; and this object is accomplished by the use of a horizontally-pivoted catch-pin, which is so constructed as to be held by its own weight in position to engage with the coupling-link at all times when not forcibly raised, and a lever or similar attachment secured thereto for raising the same when desired, all as will hereinafter be more specifically set forth.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is an end elevation of a railway-car having my improved coupling attached thereto; Fig. 2, a top or plan view of the coupling; Fig. 3, a side elevation of the same; Fig. 4, a longitudinal vertical section thereof on the dotted line *xx* in Fig. 2, and Fig. 5 a detail section on the dotted line *yy*.

In said drawings, the portions marked A represent the casting forming the draw-head of the coupling; B, the pivoted catch-pin; C, the pivot-shaft therefor; D, a weight thereon; E, a rod for lifting the catch-pin B; F, a horizontal lever attached to the rod E for operating the catch-pin; G, a vertical rod, likewise attached, for the same purpose; H, the connecting-link of the coupling; I, a housing which covers the greater portion of the working parts, and J a rod running between the rod G and the lever F.

The casting A is much like the ordinary draw-heads. It is, however, provided with a vertical mortise, *a*, in which the catch-pin B swings in addition to the transverse recess for receiving the link, and has a groove on top to receive the pivot-shaft C. Its face is also preferably of somewhat different form from that usually employed, as shown. The catch-pin

B hangs on the pivot-shaft C and swings thereon. It is of a peculiar form, as is shown most plainly in Fig. 4. Its forward face is straight and rests against the shoulders formed by the front end of the mortise *a* in the draw-head, while it grows gradually wider from its pivot to the point where the link engages therewith on its rear side, is then straight for a short distance to form a bearing for the link, and the lower end is bounded by a line which is the arc of a circle of which the pivot-shaft C is the center. The pivot-shaft C is simply a transverse shaft resting in a groove or bearings in the top of the draw-head A, and has the catch-pin B rigidly attached thereto. Its relation to said pin is such that the weight thereof has a tendency to keep it resting closely against the front end of the mortise *a*.

The weight D is rigidly affixed to the rear side of the shaft C, and its relation thereto is such that it re-enforces the natural tendency of the catch-pin B to keep in down and forward position, and insures that such position shall be maintained under all circumstances.

The rod E is loosely jointed to the rear portion of the catch-pin B by an eye, *b*, or otherwise, and extends up above the housing I, and engages with both a horizontal lever and a vertical lifting-rod, as shown.

The lever F is pivoted at *f* to the end of the car, and is secured at its outer end by an inclosing-bracket, F', which has a block which forms notches inside to hold the lever in the position wherein it is placed. At the inner end this lever is slitted or punctured, and through the slit or orifice thus made loosely passes the rod E, upon the upper end of which is a loop or enlargement to prevent it from becoming disengaged from this lever.

The rod G engages with the loop or eye *e* on the upper end of the rod E, and runs up the end of the car to or near its top, where it can be reached by a person on said top. It is secured to the end of the car by staples or clips *g*, or otherwise, and is adapted to engage with a pin, *g'*.

The link H is like the ordinary coupling-link used with other car-couplings, except that it has a central projection, *h*, which serves to prevent either end thereof from entering the draw-head too great a distance.

The housing I is simply a covering portion to prevent snow and ice from getting into the draw-head and impeding the operation of the coupling, the only orifice necessary to be formed therein being one for the reception of the rod E.

The rod J is connected to the rod G, as shown, at *j*, and has a wedge-shaped portion, *J'*, upon its lower end, which passes down behind the lever F, and which has also a projection, *j'*, which engages with the top of the lever F when the wedge has passed down a sufficient distance. This rod J operates, when the rod G is raised and hooked onto the pin *g'* in the end of the car and it is desired to unhook it without going on top of said car, by raising the lever F to push said rod G back off the pin *g'*, and allow said rod to descend. It also operates by means of the wedge, when the lever F is caught in one of the notches in the bracket F' and it is desired to disengage it without descending from the top of the car, to push said lever out until free from such engagement, as shown in Fig. 5. This arrangement thus enables one person to operate one of the means for operating the catch-pin and to disengage the other without the trouble of going to both.

The operation of my said invention may be briefly recapitulated as follows: The coupling-link H is placed in position in one of the draw-heads, as is usual with other links, and the catch-pins are in lowered position in both, the one in which the link is placed being in engagement with said link. When the cars come together the link comes in contact with the other catch-pin, forcing it back and up until the link passes under it, when it falls into said link and the coupling is complete. When it is desired to uncouple the cars it is done by means of the lever F or rod G instead of by hand, as is most common.

In Fig. 4 one of the catch-pins is shown in engagement with the link and the other raised. This is the position occupied by these parts when the cars are handled to make "running-switches" and such like operations.

I now desire to call attention to some special features of my invention.

As will be readily seen upon an examination of the drawings, the lever F and rod G are attached to the rod E independently of each other, and the rod G works entirely independently of the lever F—i. e., does not move said lever while

being operated. This is necessary so that the lever may be fastened in the notches of the holder F' and still not prevent the brake from being uncoupled by means of the rod G.

The catch-pin B, being much broader than usual just where the strain comes heaviest upon it, and formed to fit closely against the shoulders of the mortise *a* in the draw-head, cannot be broken, even though the material of which it is composed be of much poorer quality than ordinary. Being weighted, both by its own formation and by the special weight D, there can be no possibility for the coupling-pin to be thrown out of engagement, even though not fastened there, by anything short of an overturning of the train.

The upward projection *h* on the link H prevents said link from entering the draw-bar too far and thus endangering the certainty of the cars coupling automatically as they come together. A recess, *a'*, is provided in the ends of the draw-heads to receive this projection and allow the draw-heads to come directly together and serve as buffers, notwithstanding the use of a link with a projection.

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

1. The combination, with the catch-pin B, of the loosely-connected rod or link E and the lever F and rod G, each connected to said rod or link E independently of the other, whereby the catch-pin may be operated by either said lever or said rod, and if by said rod without disturbing said lever, substantially as set forth.

2. The combination, in a car-coupling mechanism with a horizontal lever and an upright rod for operating the catch-pin, of a rod connected to said upright rod and running to said lever, which is provided with a wedge upon its lower end, whereby when either said rod or said lever is operated the other may be disengaged from its fastening, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal at Indianapolis, Indiana, this 9th day of November, A. D. 1881.

JOHN S. OWEN. [L. S.]

In presence of—

C. BRADFORD,
C. L. THURBER.