(No Model.)

G. H. PACAUD.

CAR COUPLING.

No. 557,283. Patented Mar. 31, 1896.

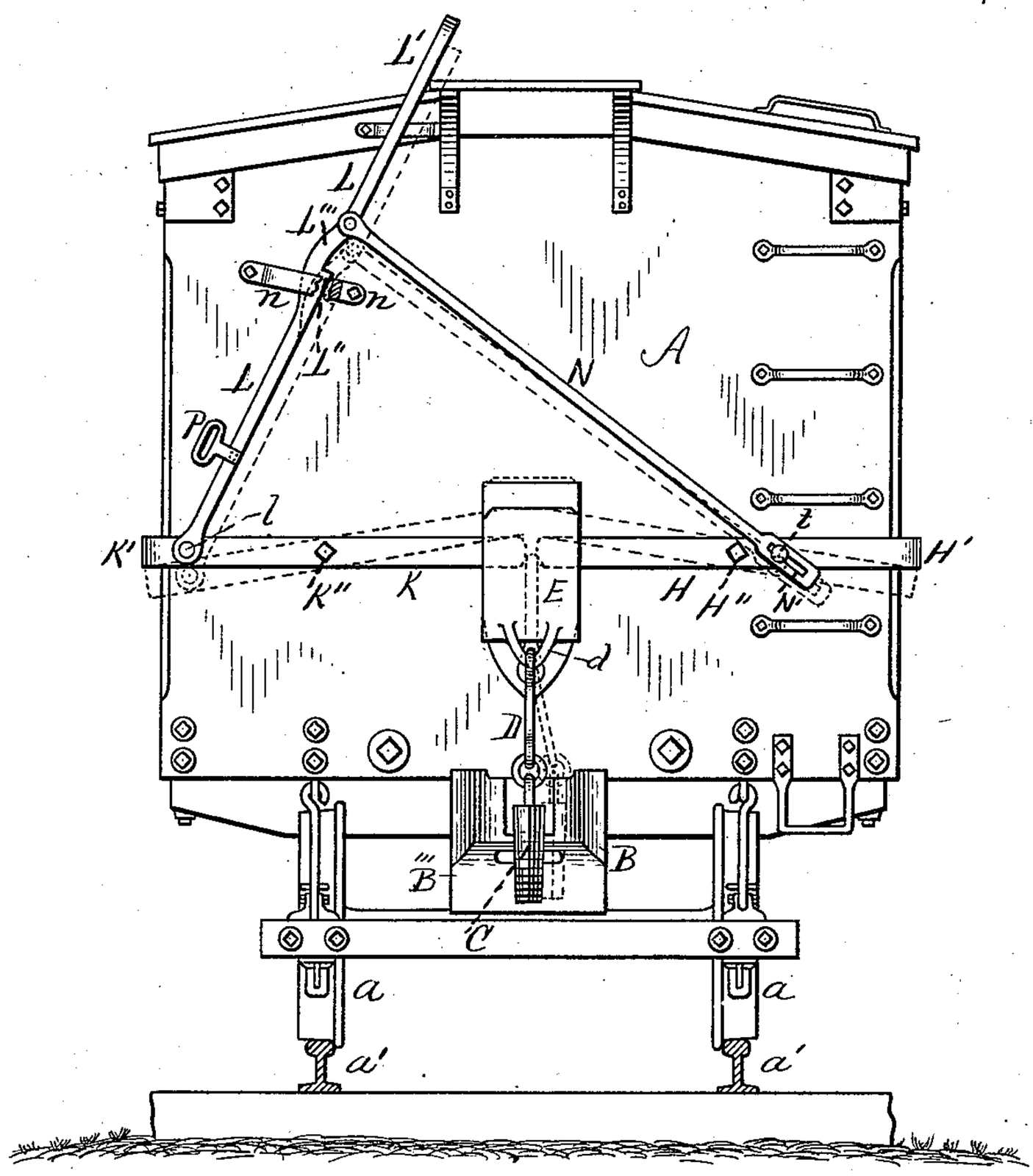

Fig. 1.

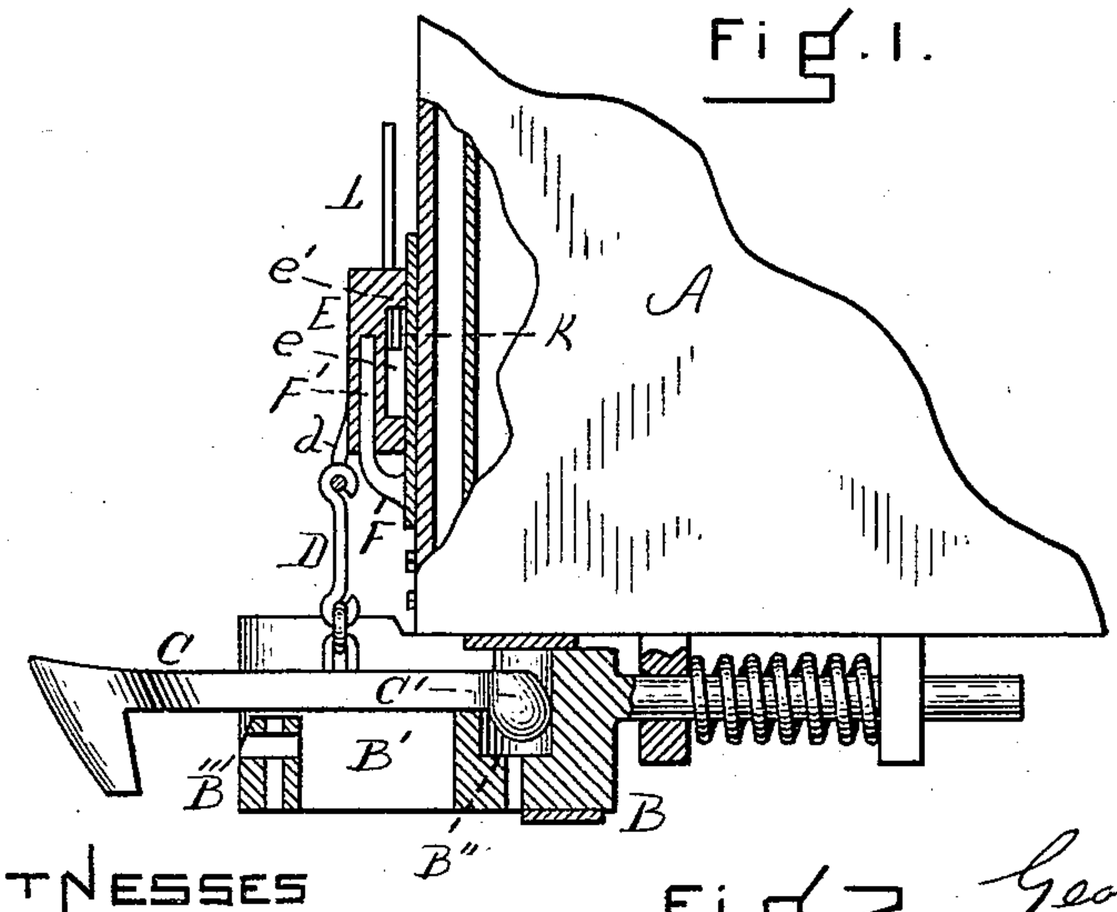

Fig. 2.

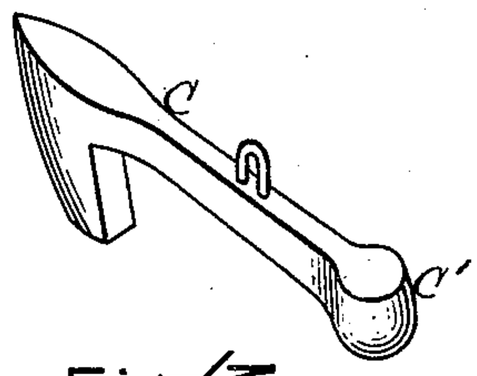

Fig. 3.

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GEORGE H. PACAUD, OF FALL RIVER, MASSACHUSETTS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 557,283, dated March 31, 1896.

Application filed February 15, 1896. Serial No. 579,365. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PACAUD, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to that class of car-couplings which are particularly adapted for freight-cars; and it consists in the novel construction and arrangement of parts hereinafter described, whereby the car may be coupled and uncoupled from either side or the top of the car without directly handling the coupling-hook, and whereby such coupling and uncoupling may be rendered certain in their operation under different conditions and upon curves as well as a straight track, all as illustrated in the accompanying drawings, in which—

Figure 1 is an end elevation of a freight-car provided with my improved coupling. Fig. 2 is an enlarged detail, partly in central longitudinal section and partly in side elevation, showing portions of my coupling device. Fig. 3 is a perspective view of the coupling-hook removed.

Similar letters of reference indicate corresponding parts.

A represents a freight-car, *a* the wheels thereof, and *a'* the track.

B represents the draw-head provided with the chamber B', such draw-head being made with an open bottom in order to prevent dirt or other substance from lodging therein.

C is the coupling-hook, whose rear end C' is formed into the approximately ball shape shown, and lies sufficiently loosely in the socket or chamber B'' in the rear portion of the draw-head to allow the front end of said hook to swing freely either vertically or horizontally. This hook is suspended in the position indicated in the drawings—that is to say, just above and out of contact with the front wall B''' of the draw-head—by means of a chain or link (or equivalent contrivance) D, whose upper end is caught over a loop *d* depending from the frame or box E. This frame E is provided with a vertical passage into which the vertical supporting portion F' of the bracket F extends loosely, said bracket being secured to the front end of the car directly over the center of the draw-head. Thus the frame is enabled to be slid vertically on said bracket by means of the mechanism hereinafter described.

H and K are two normally horizontal lifting bars or levers pivoted respectively at H'' and K'' to the end of the car, extending a little beyond the opposite sides of the car and having their outer ends H' and K' bent rearward for a short distance outside the sides of the car. The inner ends of these lifting-levers H K extend through recesses *e* in the opposite edges of the sliding frame E, and are pivoted to the car at such points that their inner edges lie normally up against the shoulder *e'*, which constitutes the upper wall of said recess *e*.

It is evident that the hook C, which is adapted to catch in an opposite draw-bar made exactly similar to that in which it hangs, can be lifted in order to uncouple the car from either side of the freight-car by bearing down the bent portion or handle H' or K' of the lifting-lever H or K, such operation raising the sliding frame E into the position indicated by broken lines in Fig. 1 and pulling up the hook C by means of the connection D.

L is a bar pivoted at its lower end at *l* to the lever K near the outer edge of the end of the car and extending up diagonally, as shown, through the metallic strap or eye *n* secured to the end of the car, and thence up to the roof, at which point it is bent rearward over the car at L'. Pivoted at one end to this bar L at *m* is a link N, whose opposite end is slotted at N' and thereby engaged by the pin *t* extending from the lifting-bar H.

It will readily be seen that a brakeman on the roof of the car can, by pressing down the handle L' of the bar L, press down the outer ends of the lifting-bars H K and thus lift the coupling-hook from the car-roof.

In order that when the coupling-hook has been lifted it may remain in a raised position, the bar L is recessed at L''' to form a shoulder L'', which shoulder is adapted to catch under the inner edge of the metallic strap or loop *n* by gravity or by the natural direction of the pressure upon the handle L' when the brakeman presses down said handle for the purpose of lifting the coupling-pin. Moreover, the same effect—that is, the locking of the bar L—

is produced by gravity when the coupling-pin is raised by pressing down either of the handles H′ and K′.

To release the coupling-pin from its raised position and allow it to drop and thereby couple on a car, the brakeman, if on the roof, swings the upper end of the bar L outward out of engagement with the part *n* and the hook drops by gravity. A brakeman on the side of the car next the lifting-bar H lifts the handle H′, and the pin *t* in the slot N′ raises the bar N and thus disengages the bar L. To drop the coupling-hook from the side of the car next the bar K, the bar L is pulled outward out of engagement with the locking device *n* by grasping the handle P.

The coupling-hook C, being always out of contact with the front wall B‴ of the draw-bar, being free to swing horizontally as well as vertically by reason of the shape of its rear end or knuckle C′, and being suspended from a point which is exactly over the center of the draw-bar, always hangs centrally in said draw-bar, and is therefore always ready to engage the draw-bar of an approaching car centrally, and cannot lie on one side or the other of the center, as would be the case if it rested on a portion of the draw-bar. The front end of the coupling-hook being formed into an edge, it easily slips by the edge of the approaching hook in coupling and, owing to the construction above described, is intended to couple equally as well on a curve as on a straight track.

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

1. In a freight-car coupler of the character described, the combination of the coupling-hook C adapted to swing from its rear end in the draw-bar; the vertically-sliding frame E connected with and adapted to lift the front end of said hook; a support secured to the end of the car over the draw-bar for said frame to slide on; the lifting-bars H, K pivoted to the end of the car and with their inner ends engaging the sliding frame; the bar L extending from the bar K to the top of the car and provided with the recess L‴ and shoulder L″ whereby said bar can catch and lock under a suitable projection on the car; and the link N extending from the bar L to the lifting-bar H and pivotally secured to both; substantially as described.

2. In a freight-car coupler of the character described, the combination of the draw-bar B provided with the recess or socket B″ and front wall B‴; the coupling-hook C provided with the curved rear end C′; the central vertically-sliding frame E connected with the coupling-hook and sustaining it centrally in the draw-bar and with its front end out of contact therewith; a support secured to the car for said sliding frame; the lifting-bars H, K pivotally secured to the car and engaging the sliding frame; the bar L extending from one of the lifting-bars to the top of the car; and the link connecting the bar L with the other lifting-bar; substantially as set forth.

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