J. A. GALE.

Car-Couplings.

No. 140,131. Patented June 24, 1873.

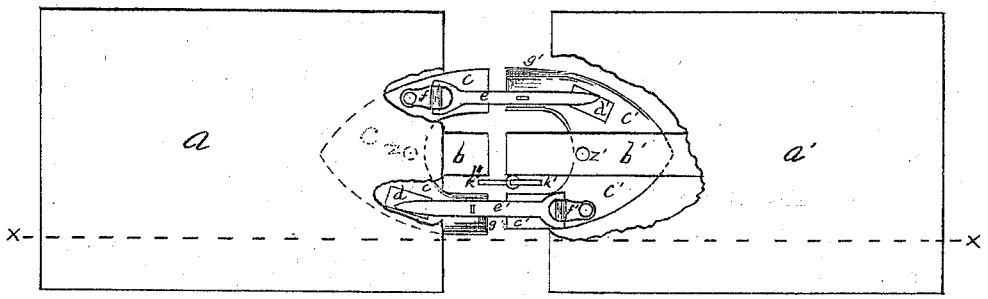

Fig. 1.

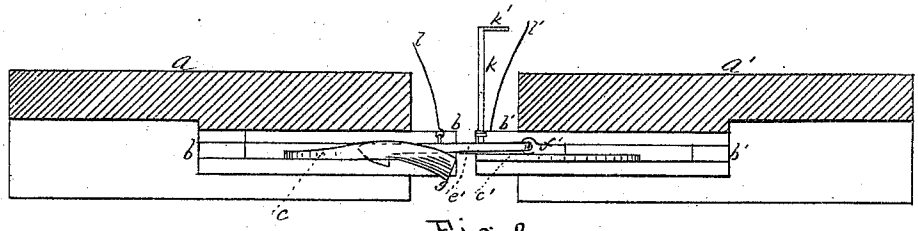

Fig. 2.

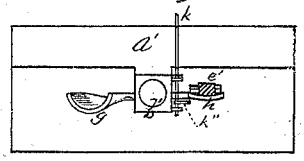

Fig. 4

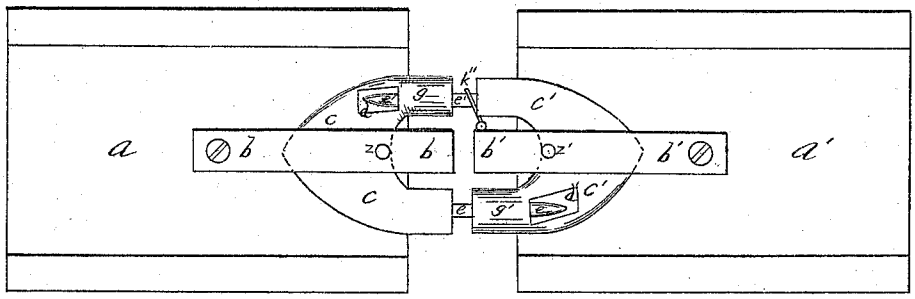

Fig. 3.

WITNESSES

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JAMES A. GALE, OF WEST MEDWAY, MASSACHUSETTS.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **140,131**, dated June 24, 1873; application filed October 16, 1872.

To all whom it may concern:

Be it known that I, JAMES A. GALE, of West Medway, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Car-Shackles, of which the following is a specification:

My invention relates particularly to a shackle which is self-acting both in shackling and unshackling, but more particularly in the former. In connecting cars by means of the below-described shackle the assistance of a brakeman or other person is not required, the shackle being entirely self-acting. The danger attaching to the method now in common use of shackling railroad cars and "making up" trains is thus wholly obviated.

The nature of the invention is fully described below.

In the accompanying drawings, Figure 1 is a plan of the upper side of two car-platforms and of their respective shackling devices embodying my invention, and by means of which the said platforms are connected. A portion of each of the platforms is represented as broken out, in order to show more plainly the shackle beneath it. Fig. 2 is a longitudinal section of the same cut in the direction and position of the line *x x*. Fig. 3 is a plan of the under side. Fig. 4 is an end view of one of the platforms with its shackling device, the hook being represented in section.

Similar letters of reference indicate corresponding parts.

a a' represent the two platforms. *b b'* are those parts which ordinarily hold the link used in shackling, and commonly known as "bunters." *c c'* are peculiarly-shaped and very strong iron plates, which, when placed together, form a continuous link, (see Figs. 1 and 3.) These half-links *c c'* are movable sidewise, and are hinged to the bunters *b b'* at the points *z z'*. *d d'* are openings or apertures in and through the plates *c c'* at the proper places, into which the hooks drop and catch. *e e'* are strong hooks, which are guided and drop into the apertures *d d'*, thus shackling the cars. These hooks *e e'* are hinged to iron pieces *f f'*, which are pivoted to the plates or half-links *c c'*. The hooks therefore can be thrown up so as to drop into the apertures *d d'*, or even up out of the way, if desired; or they can move sidewise to be guided properly to their destinations as the cars approach. *g g'* are trough-shaped channels or ways forming one end of each plate *c c'*, and so constructed and shaped for the purpose of guiding the hooks *e e'* to their apertures *d d'*. The opposite ends of the plates or half-links *c c'* are made slightly concave upon the upper side in order to keep the hooks *e e'* in place. (See *h*, Fig. 4.)

In practical operation, as the cars approach, the hooks *e e'*, kept in proper position by the shape of the ends *h* of the plates *c c'*, upon which they rest, are guided by the channels *g g'* into the apertures *d d'*, and, having dropped into which, they securely shackle the cars. No curve is too sharp to prevent their being guided to their destination. Unshackling while the train is running is impossible, unless it is intentionally performed, as both the hooks hold, and as both plates *c c'* and hooks *e e'* are so arranged, as above described, as to turn in any direction. There can be hinges made in the hooks *e e'* at any points, if desired, in order to turn them up or double them back out of the way.

There can be various methods devised for unshackling, two of which are shown in the drawings.

Chains *l l'* can be directly attached to the hooks *e e'*, extending to the platforms of passenger-cars or to the tops of freight-cars.

Another, and possibly a better, method is shown in the bent rod *k k' k''*. The part *k* is perpendicular, and extends from below the hook to about the level of the brake-handle. The parts *k' k''* are horizontal.

To unshackle, grasp the part *k'* and turn it until the part *k''* extends under the hook; then raise it, and it will knock the hook up and out of the aperture.

Of course the great advantage in view which this shackle has over the common link is its lessening the danger of accidents; at the same time it is less expensive; and can, if necessary, be attached to a common car having the old-fashioned shackle.

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

The plate or half-link *c* having the aperture *d*, channel *g*, concave upper side *h*, and hook *e*, arranged to operate as described.

JAMES A. GALE.

Witnesses:
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