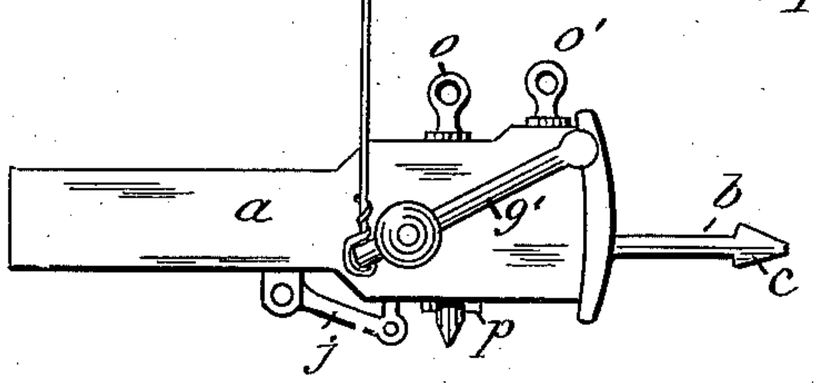
(No Model.)

G. W. LARAWAY.

CAR COUPLING.

No. 294,797. Patented Mar. 11, 1884.

Fig. 1.



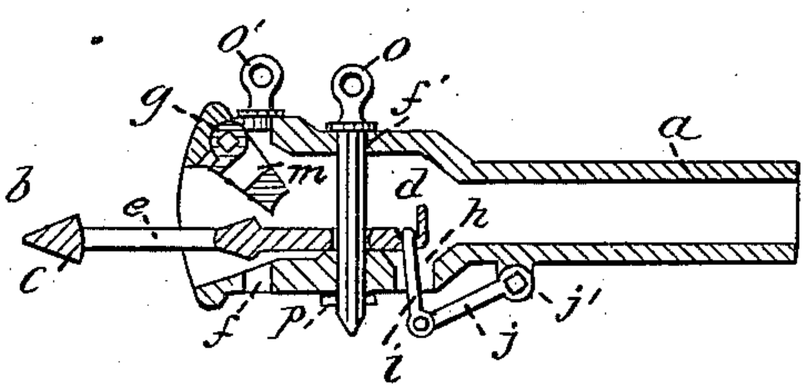


Fig. 6.

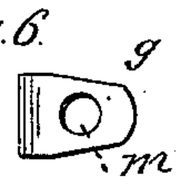


Fig. 2.

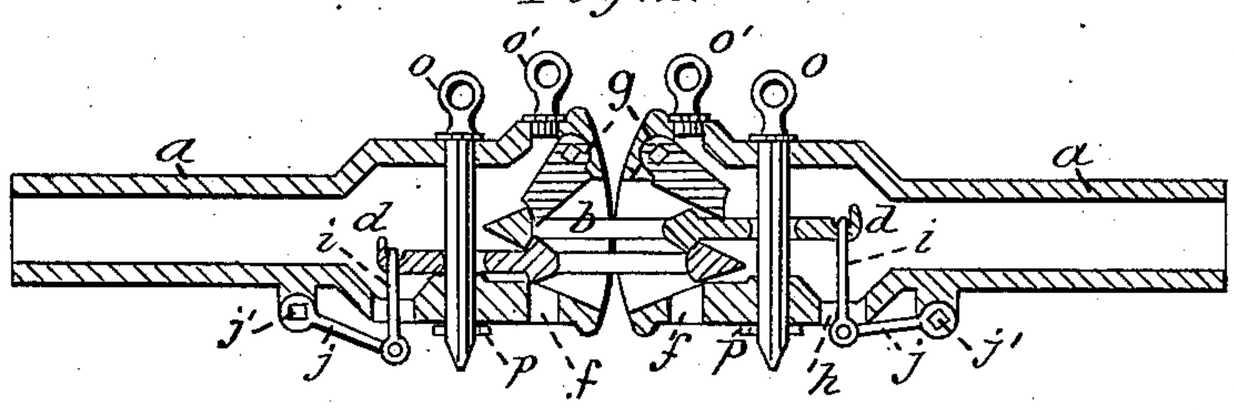


Fig. 3.

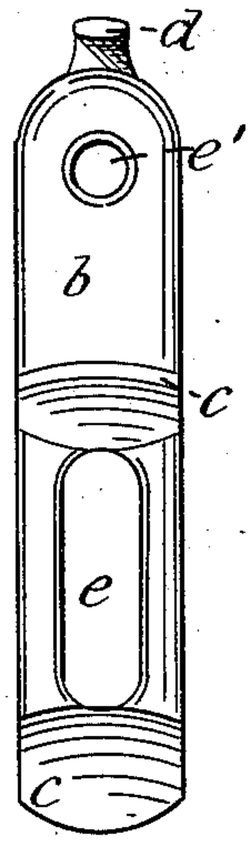


Fig. 4.

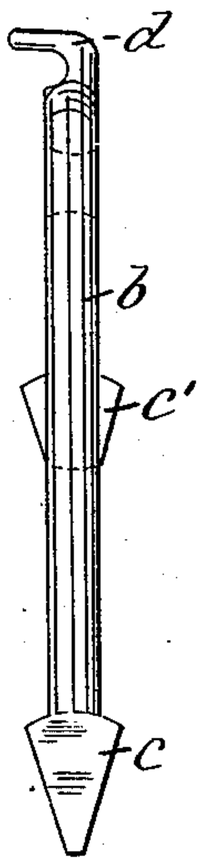
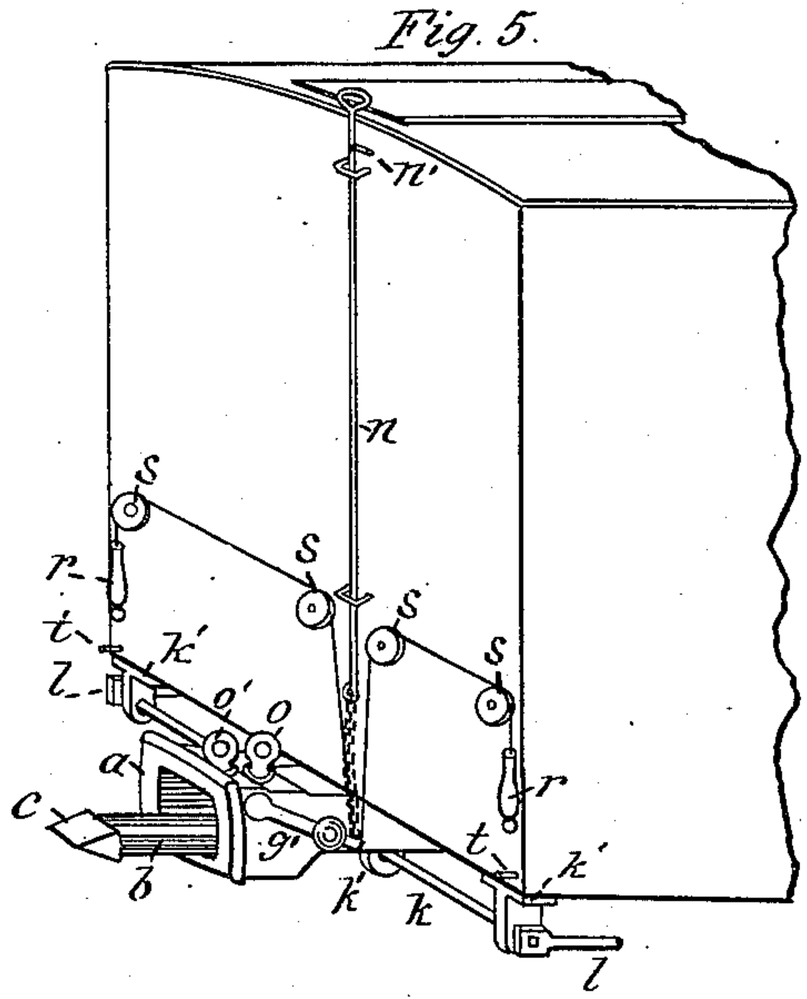


Fig. 5.



Witnesses.

Chas L. Burdett

H. C. Marsh

Inventor.

George W. Laraway

By W. E. Simonds, Atty.

UNITED STATES PATENT OFFICE.

GEORGE W. LARAWAY, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-FOURTH TO FRED C. ROCKWELL, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 294,797, dated March 11, 1884.

Application filed December 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. LARAWAY, of Hartford, in the county of Hartford and State of Connecticut, have invented a certain new and useful Improvement in Car-Couplers, of which the following is a description, reference being had to the accompanying drawings, where—

Figure 1 is a view of my improved coupler, in which two draw-heads are shown, one in side view and one in longitudinal vertical section. Fig. 2 is a view of same in longitudinal vertical section, showing the device as coupled. Fig. 3 is a top view of my improved link on enlarged scale. Fig. 4 is a side view of link. Fig. 5 is a view of the end of a freight-car equipped with my improved coupler. Fig. 6 is a detail view of the pawl.

My device relates to that class of car-couplers in which the size and proportions of the old link-and-pin couplers are substantially retained, but with such added improvements as to completely remove the danger attending the use of the old form and render the new device automatic or not, as desired.

In the accompanying drawings, the letter *a* denotes the draw-head, which is made of iron, as in the present common form.

b denotes a link, provided with a wedge-shaped anterior end, *c*, projections *c'*, hook *d*, slot *e*, and hole *e'*.

About three inches in rear of the face of the draw-head a central vertical perforation, *f*, of suitable section to admit the standard-pin, is made. Farther back from the face a similar perforation, *f'*, is provided for another pin, *o*, of like shape. A pawl, *g*, is pivoted near the upper and front part of the draw-head and extends to the rear within the head. This pawl is operated by a pawl-lever, *g'*, mortised at one end to fit a square tenon on the end of the pawl-pivot.

Back of the rear pin a perforation, *h*, in the lower part of the draw-head permits the passage to the interior thereof of a connecting-rod, *i*, pivoted to crank *j* at one end, and arranged to fit over hook *d* on the link at the other end.

Through a mortise, *j'*, rectangular in section, in crank *j*, a steering or guiding rod, *k*, is fitted, which extends to both sides of the car at the end, and is operated by the lever *l*. The rod *k* is supported by suitable stands or pivot-bearings, *k'*, attached to the under side of the car and draw-head.

In operation a link placed in the draw-head is attached to the rod *i* by means of the hook *d* or similar device, and fastened against lateral or longitudinal motion by the pin *o*, which is secured in place in the draw-head by a spring-pin, *p*, or a similar device. The pawl-lever *g'* is connected by means of wires or rods to handles at the top and sides of the car, as seen in Fig. 5, thus affording means of raising the pawl *g* when desired. Short pins *o'* are placed in the upper parts of perforations *f*, to exclude snow, ice, and dirt. When two cars thus equipped and of standard height of draw-heads meet on a track, the links slide one over the other, and the forward end of the upper link passes over the projection *c'* and lifts the pawl *g*, which drops into place back of the end and holds the link locked in position with the draw-heads nearly in contact. The forward end of the lower link is pressed back of and held by the projection on the upper link and aids in coupling the cars. The weighted end of lever *g'* holds the pawl depressed, as well as the tension on the links, and the greater the tension the firmer is the hold of the pawl upon the links.

In case the draw-heads are of unequal heights, a brakeman at either side of the car can, by turning lever *l*, raise the forward end of the lower link, which is thus adjustable for six or eight inches.

To uncouple the cars, the pawl-lever *g'* is raised and the link allowed to slip out from under the pawl, and by fastening the lever in such raised position, as by slipping the handle over a pin or by a latching device, the cars may be run together without coupling.

In the event of injury to the link, pin, or pawl of my device, the draw-head can be at once fitted for use with an ordinary link and pin by removing the dummy-pins *o'* and using the perforations *f*, a hole, *m*, through the pawl,

as shown in Figs. 1 and 6, permitting the passage of a pin through it.

Cars fitted with my device may be uncoupled from the top of the car by lifting the rod *n*, connected by a short chain to lever *g'*, and the pawl *g* can be secured in a position to prevent automatic coupling by a quarter-turn of the rod *n*, which places the pin *n'* in a socket on the edge of the car-roof. From either side of the car the same end can be accomplished by pulling down on the handle *r*, connected by chain or cord passing over pulleys *s* with lever *g'* and hooking the handle over pin *t*.

I claim as my invention—

1. In a car-coupler, a link wedge-shaped at one end, provided with projections about midway of its length, with the hook at the other end, and having perforations for the passage of coupling-pins, all substantially as described, and for the purpose set forth.

2. In a car-coupler, the draw-head *a*, having the vertical perforations *f* and *f'* in the central line of the draw-head, in combination with the pawl *g*, the pin *o*, and the link *l*, all substantially as described.

3. In a car-coupler, in combination, the draw-head *a*, having the vertical central perforations, *f* and *f'*, the pawl *g*, with vertical perforation, the link *b*, the pin *o*, and lever *g'* and connected mechanism for operating the pawl, all substantially as described.

4. In a car-coupler, the combination of draw-head *a*, having perforations *f f' h*, pawl *g*, pawl-lever *g'*, link *b*, connecting-rod *i*, crank *j*, rod *k*, and lever *k'*, all substantially as described, and for the purpose set forth.

5. In an automatic car-coupler, the combination of draw-head *a*, link *b*, pin *o*, secured in the draw-head by spring-pin *p*, pawl *g*, and lever *g'*, and mechanism for operating the lever from the sides or top of the car, all substantially as described, and for the purpose set forth.

GEORGE W. LARAWAY.

Witnesses:
CHAS. L. BURDETT,
FRED C. ROCKWELL.