

S. GARRATT.
Car-Coupling.

No. 220,713.

Patented Oct. 21, 1879.

Fig. 1.

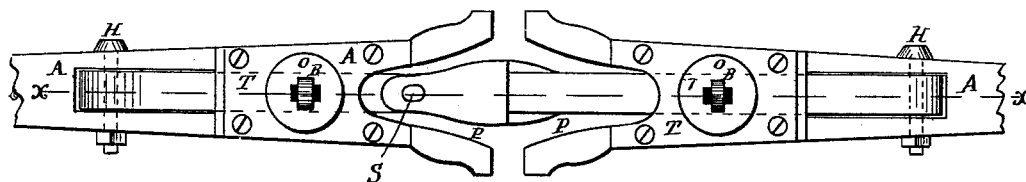


Fig. 2.

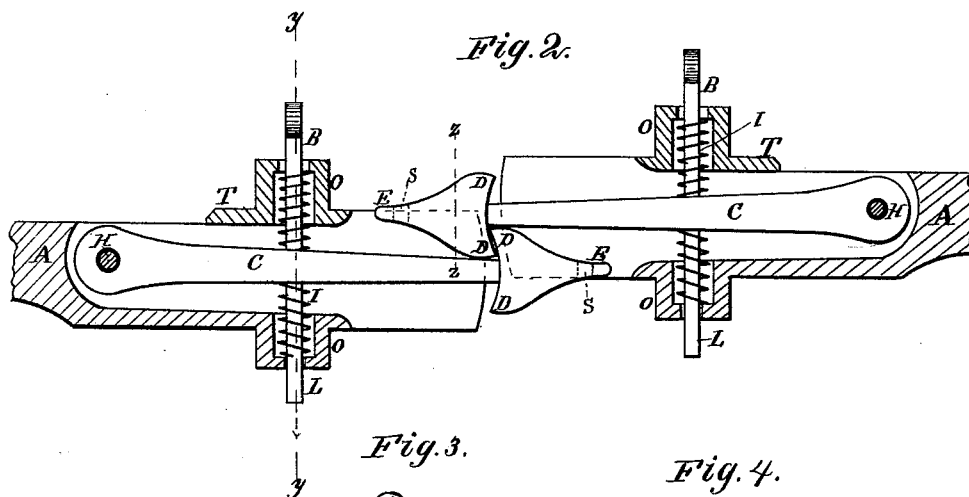


Fig. 3.

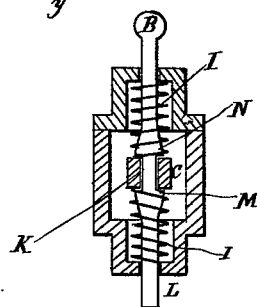


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SIMEON GARRATT, OF COLUMBUS, OHIO.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **220,713**, dated October 21, 1879; application filed February 25, 1879.

To all whom it may concern:

Be it known that I, SIMEON GARRATT, of Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Self-Acting Car-Couplings, of which the following is a specification.

Figure 1 is a top view of the coupling. Fig. 2 is a vertical longitudinal section through *x x*, Fig. 1, showing the anchors coupled. Fig. 3 is a view of the pin through *y y*, Fig. 2, connecting with and serving to uncouple the anchors. Fig. 4 is a sectional view through *z z*, Fig. 2, showing the convexity and concavity of the anchor-heads.

Similar letters of reference indicate corresponding parts.

The object of the invention is a self-acting car-coupling, which will couple high or low, which, when running, will only come apart by the use of the lever, but which will immediately separate should the cars run off the track.

The coupling consists in the combination, with the draw-head A, of an anchor concave on the upper and convex on the lower side, pivoted within an opening in the draw-bar, and a spring-bolt, B, passing through the anchor-bar C, and moving with it to couple and uncouple the cars.

The heads of the coupling or anchor bars are made somewhat like an anchor, with the horns D D projecting from the opposite sides of the anchor-bar, and terminating in a point, E, with curved sides, to allow the anchor points to pass and ride over each other and to interlock their horns in coupling the cars.

The anchor-heads are made concave from horn to point on their upper surfaces, F, and convex from horn to point on their under surfaces, G, as shown at Fig. 4, in order to guide them easily over and past each other. In such action both anchors yield and turn slightly upon their pivot-bolts H, and when so coupled the anchors are held by strong springs I, arranged upon the bolts B on opposite sides of the anchor-bar, so that whether the anchors be raised or lowered in coupling the springs act to keep the anchors locked.

The anchor-bolts are of peculiar construction, in order that they may be secured in a slot, K, in the anchor-bar and locked therewith.

This is effected by making the lower portion, L, of the bolt flat or square, with a shoulder, M, so as to pass through the slot K, and by a shoulder, N, upon the anchor-bar, with a cylindrical neck within the slot K, so that when the bolt is inserted and turned to bring the shoulder M across the slot K it is thereby locked with the anchor, and can only move up and down with it, as it is prevented from turning by its square end L entering a corresponding hole in the lower side of the draw-head.

As before stated, springs I I are arranged to bear upon the upper and lower sides of the anchor-bars, and these springs are seated at their outer ends in extension-sockets O in the upper and lower sides of the draw-heads, in order to gain space enough for the springs without making the draw-heads too deep.

A very important feature of my invention consists in constructing the draw-heads with top and bottom openings, or rather a vertical opening, P, to receive and allow the anchors to pass into the draw-bars, and thereby avoid having the usual flaring mouths. These openings correspond somewhat with the form of the anchor-heads, and when the latter are coupled both the draw-heads and the platforms make close couplings, and the anchors are held securely in place.

The action of the bolt-springs holding the anchor-heads firmly against each other obviates all danger of a separation taking place by any oscillation or jumping of the cars while in motion.

The anchors are made in the form of an elongated wedge, and are longitudinally convex on the lower and concave on the upper side, so that they may couple themselves when brought together, and they will easily couple on a difference in the level of the cars of from six to ten inches.

Should the cars overturn while running, the anchors will uncouple at once. This great advantage results from the unobstructed vertical openings in the draw-heads, within which the anchors fit.

The anchors will hold with a depth of three inches, which is an important point gained by the open draw-heads.

The anchor-heads can be uncoupled by rais-

ing or depressing one of them by means of a lever attached to the upper end of bolt B, or in any other suitable manner.

The anchors are provided with a hole, S, in their points, so that they can be used as an ordinary coupling-link, if desired.

Each draw-head is provided with a cap-plate, T, which can be removed to allow the bolt to be secured in place in passing it through the opening in the anchor-bar.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

A car-coupling whose rear-pivoted and spring-supported coupling-bar is provided with an anchor concaved on the upper side and convexed on the lower, as shown and described, for the purpose of being used as specified.

SIMEON GARRATT.

Witnesses:

GEORGE DE BEAULIEU,
ANDREW J. MARTIN.