To all whom it may concern:

Be it known that I, Edgar E. Sell, a citizen of the United States, and a resident of Charleston, Charleston county, South Carolina, have invented certain Improvements in Car-Couplings, of which the following is a specification.

My invention consists of certain improvements, fully described and claimed hereinafter, in car-couplings, the improvements being especially adapted to freight-cars.

In the accompanying drawings, Figure 1, Sheet 1, is an end view of part of a railroad-car with my improved coupling; Figure 2, a longitudinal section on the line 1 2, Figure 3; Figure 3, a plan view, partly in section, on the line 3 4, Figure 2; Figure 4, Sheet 2, a perspective view of the duplex draw-head; Figure 5, a sectional perspective view of the same; Figure 6, a perspective view of a single draw-head; Figure 7, a longitudinal section of two single draw-heads coupled; Figures 8, 9, and 10, views of different forms of links which may be used in carrying out my invention, and Figure 11 a detached perspective view of part of the duplex coupler.

Referring, in the first instance, to Figures 1, 2, 3, 4, and 5, A is the draw-head, having two compartments, B and D, the former containing the link G for coupling with an opposite draw-head, A', as shown in Figures 2 and 3, the compartment D, through which passes a pivoted pin, n, receiving a link partly contained in the compartment B of the opposite draw-head. Each draw-head has the usual tailpiece, e, and buffer-springs e, and the frame of the car has the usual bumpers, f.

Passing through the compartment B of the draw-head A is a pin, g, which also passes through an opening in the link G, this opening being large enough to permit the link to move freely, to a limited extent, in any direction. A projection, i, in Figure 8, on the rear of the link G, passes through a pendent weight, H, the stem of which passes freely through but is controlled by a slot in the said draw-head, so that while the weight permits the link to move laterally, its tendency is to maintain it in a central position. The weight, moreover, has a tendency to keep the link in the horizontal position shown in Figure 2, for the said weight has shoulders w w, Figure 11, for bearing on the bottom of the draw-head. The pin n passes through the compartment D of each draw-head, and is pivoted to a lever, J, so as to swing backward, as indicated by the arrow, Figure 2, when struck by a link of the opposite draw-head, the lever J being hinged to lugs j cast on the draw-head, and being steadied by lugs k.

The draw-heads and mechanism connected therewith are precisely alike, but the compartment B of one draw-head is directly opposed to the compartment D of the other draw-head. When one draw-head approaches the other, the links G will push the pivoted pins n back until they can fall through the elongated openings of the links, their lower ends entering recesses s made in the bottoms of the draw-heads. Each compartment D is made on a taper, in order that the link which enters it may be in a proper lateral position to receive the falling pin, and the entrance to the recess s is made flaring, so as to insure the entrance into the same of the lower end of the pin. The lever J is bent downward on one side of the draw-head, and two chains, m m', are attached to it, these chains passing up over pulleys on the frame E of the car, and one chain, m, being directed to one side of the car, and the other chain, m', to the opposite side of the car, in order that uncoupling may be effected from either side without having to pass between the cars.

When it is desired to retain the coupling, the pin in an elevated position, either of the chains may be fastened to hooks p on the sides of the car.

By constructing the lever J in the peculiar manner shown, I am enabled to raise the pin clear of the link without elevating the lever above the platform of the car, the end of the lever being of sufficient weight to prevent the vertical displacement of the pin.

Parts of the devices described above may be used in connection with single draw-heads, as shown in Figures 6 and 7—that is, the pin may be pivoted to the lever J, and the latter raised by the chains m m', but when this single head is used the link should have a finger, i, as shown.
in Figs. 7 and 9, to prevent the link from passing too far into the draw-head.

The projection \( i \) may be made long enough to bear against the back of the draw-head, as shown by dotted lines in Fig. 7, for serving the same purpose.

Figs. 10 and 11 are balanced links, Fig. 11 being a double link, both being in this case used without the pendent weight \( H \).

I claim as my invention—

1. The combination of a draw-head having two compartments, \( B \) and \( D \), a link, \( G \), contained within and projecting from the compartment \( B \), and having a projection, \( i \), and a weighted arm, \( H \), pivoted to the draw-head and exercising a lateral controlling influence on the link, substantially as set forth.

2. The combination of the draw-head and the lever \( J \), pivoted thereto, with a retaining-pin, \( a \), pivoted to the lever, and chains \( m \), extending over pulleys to the side of the car for raising the lever, substantially as set forth.

3. The combination of the draw-head and lever \( J \), bent downward at the side of the draw-head, with a pin pivoted to the said lever, and chains connected to the bent end of the lever and extending to the opposite sides of the car, as and for the purpose desired.

4. The combination of the draw-head and a hinged lever, \( J \), bent downward at the side of the draw-head, with a pin, \( n \), pivoted to the said lever, chains \( m \), connected to the bent end of the lever and extending to the side of the car, and hooks \( p \) for the chains, substantially as specified.

5. The combination of the draw-head having a tapering slot, \( s \), with a lever, \( J \), hinged to the side thereof, and a pin, \( n \), pivoted to the lever, as and for the purpose described.

6. The combination of a draw-head with a link pivoted thereto, and having a projection, \( i \), and a weighted arm, \( H \), pivoted to the draw-head and exercising a lateral controlling influence on said projection \( i \), as set forth.

7. The combination of a draw-head with the lever \( J \), carrying the pin \( a \), and projecting downward at one side of the draw-head, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDGAR E. SELL.

Witnesses:

JOHN M. CLAYTON,
HENRY HOWSON, JR.