

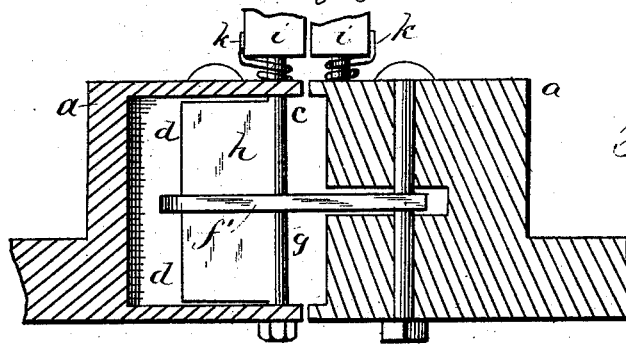
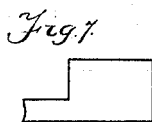
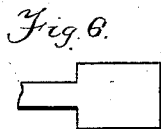
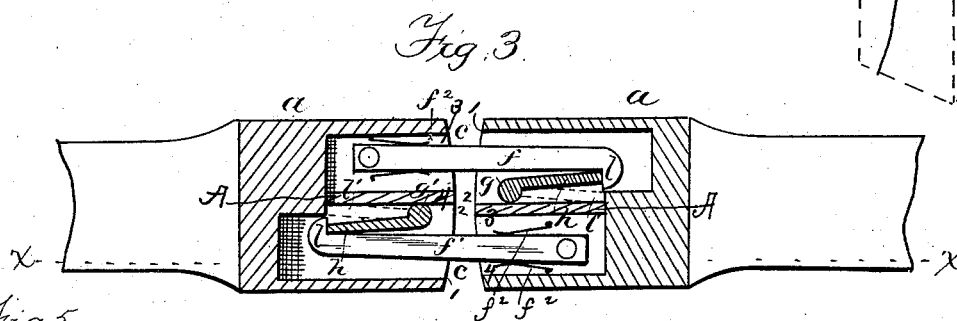
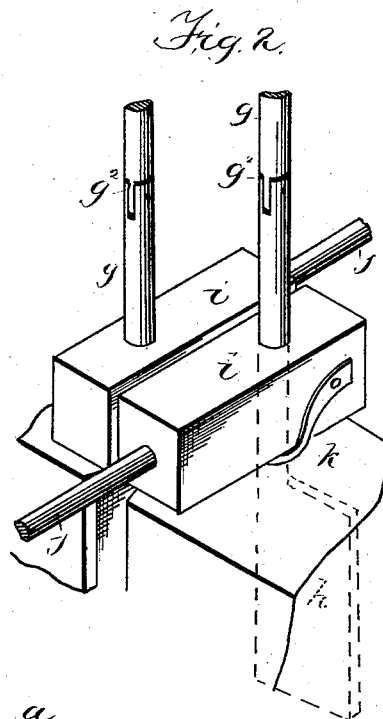
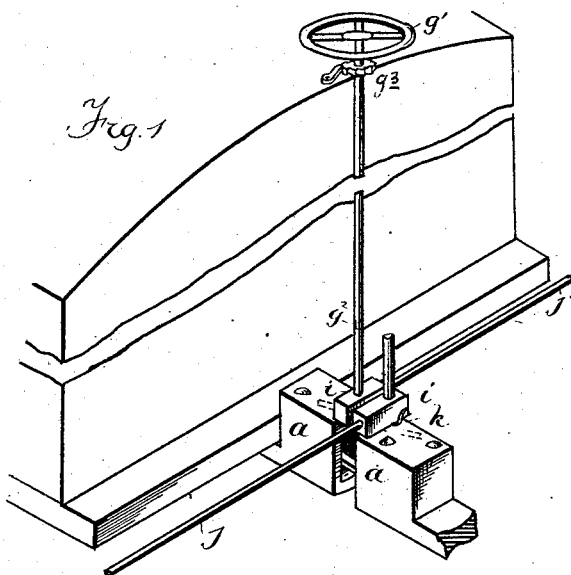
(No Model.)

F. S. LEE & J. D. HORTON.

CAR COUPLING.

No. 305,085.

Patented Sept. 16, 1884.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK S. LEE AND JOSEPH D. HORTON, OF SYRACUSE, NEBRASKA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 305,085, dated September 16, 1884.

Application filed June 2, 1884. (No model.)

To all whom it may concern:

Be it known that we, FRANK S. LEE and JOSEPH D. HORTON, citizens of the United States, residing at Syracuse, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Car-Couplers; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to car-couplers; and it consists in the novel construction and arrangement of its parts.

Figure 1 is a perspective view of the same attached to a railway-coach. Fig. 2 is an enlarged view of the levers *i i*, rods *g g* having flexible joint *g²*. Fig. 3 is a top sectional view of the coupler. Fig. 4 is a vertical sectional view cut through Fig. 3 at line *x x*. Fig. 5 is a view of the shape of the draw-head when to be used on high platforms; Fig. 6, the shape when to be used on medium-height platforms, and Fig. 7 when the platform is higher.

Our car-coupler is described as follows: Our draw-heads *a a* have the general shape of ordinary draw-heads, being large at the mouth to receive the draw-hooks; but the mouth *c c*, while extending from *d* to *d*, Fig. 4, up and down, only extends half-way across the head from 1 to 2, Fig. 3. The other halves have a hook, *f f'*, in each, securely bolted in the same. These hooks *f* and *f'* have a limited lateral movement, and are held in their normal position by lateral springs *f² f²*. In each one of these draw-heads *a a*, and in mouths *c c*, are pivoted rods *g g*, which have on their lower ends a key, *h h*. These rods have rigidly secured to them, just above the upper face of the draw-heads *a a*, levers *i i*, set crosswise the draw-heads, the handles *j j* of which extend to the outer sides of the coach, so that they can be operated by one standing outside of the railway-track. The rods *g g* extend to the top of the coach, and have a wheel, *g'*, mounted on their upper ends, so that the levers *i i* and keys

h h can be operated from the top of the coach. These rods have flexible joints *g² g²*, so that their upper ends can be run on either side of the footway on the top of the coaches, and thus allow the brakeman to pass from one coach to the other without these rods being in his way. It also has a ratchet-wheel and dog, *g³*, to hold it from turning when it is deemed necessary to be held unlocked. The levers *i i* are held in position crosswise the draw-heads by spiral springs *k k*, which hold the keys *h h* in the position seen in Figs. 3 and 4—that is, in the seats *l l* of the hooks *f f'*. The lower end of this spiral spring is secured to the draw-heads *a*, and the upper end to levers *i*. These spiral springs *k k* may be placed on the inside of the draw-heads in the bottom of key-seat *l'*, in which case they are compression-springs.

The coupler is self-coupling. When the coaches run together, the hooks *f f'* enter their respective mouths *c c* and press back the keys *h h*, and, when the draw-hooks are driven home, the keys *h h*, by means of the springs *k k* and the levers *i i*, are thrown into seats *l l* of the draw-hooks *f f'*. When we wish to uncouple the same, we pull upon either lever *i i*. This throws the keys *h h* out of seat *l* and into their bed *l' l'*, and the draw-heads are easily withdrawn; or, if we are on the top of the coach, we turn the wheel *g'*, which has the same effect. By turning either wheel *g'* or pulling on either lever *i* we throw both keys back into beds *l' l'*, for, as will be seen, the levers *i i* impinge against each other.

Among the many other advantages claimed for our coupler we claim that it couples coaches of different heights. The draw-heads may be made deep as the whole length of the keys *h h*, and they may be made as long as desired for this purpose, in which case the keys *h* and levers *i* should be made correspondingly deep.

As the hooks *f f'* can play up and down the whole length of the keys *h*, it will be seen that our coupler will couple coaches as different in height as the draw-heads are deep.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of draw-heads *a*, draw-

hooks $f f'$, keys h , rods g , bearing-wheel g' ,
and ratchet g^3 , levers i , having handles j , and
spiral springs k , all when arranged substan-
tially as shown and described, and for the pur-
5 poses set forth.

2. Rods $g g$, pivoted in said draw-heads a ,
having flexible joints g^2 , and bearing on their
upper ends wheel g' and ratchet g^3 , and on
their lower ends key h , substantially as shown
10 and described, and for the purposes set forth.

In testimony whereof we affix our signatures
in presence of two witnesses.

FRANK S. LEE.
JOSEPH D. HORTON.

Witnesses:

EDWIN J. MURFIN,
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