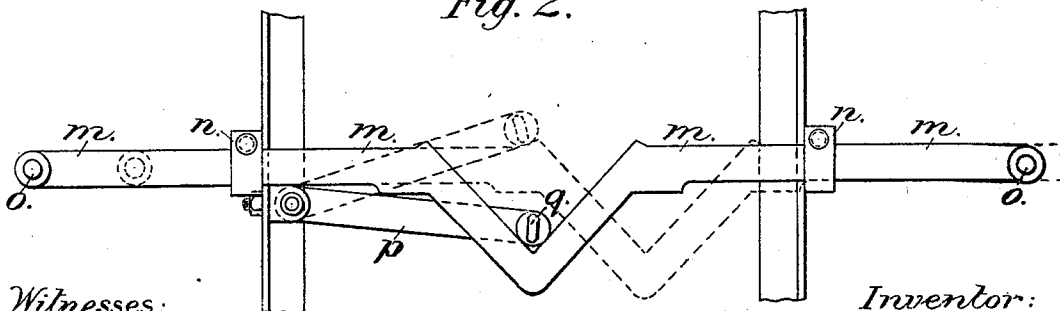
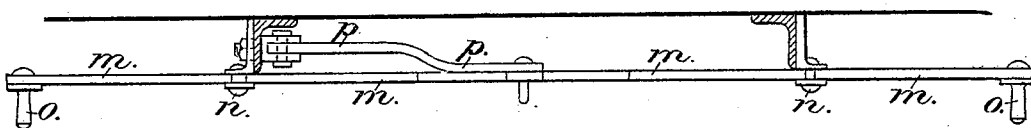
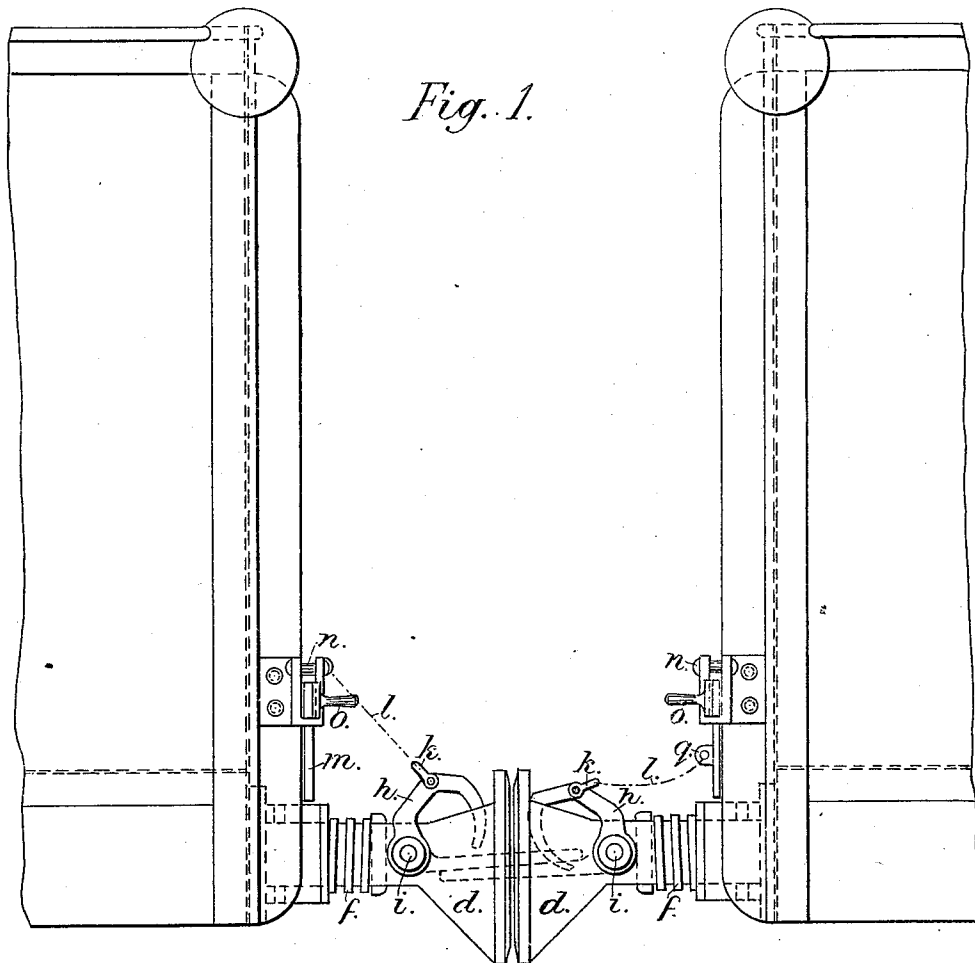


G. JOHNSTON.
CAR COUPLING.

No. 510,028.

Patented Dec. 5, 1893.



Witnesses:
N. C. Fandberg
E. C. Barker.

Fig. 3.

Inventor:
George Johnston
by Fairfax & Wetters
Attorneys.

G. JOHNSTON.
CAR COUPLING.

No. 510,028.

Patented Dec. 5, 1893.

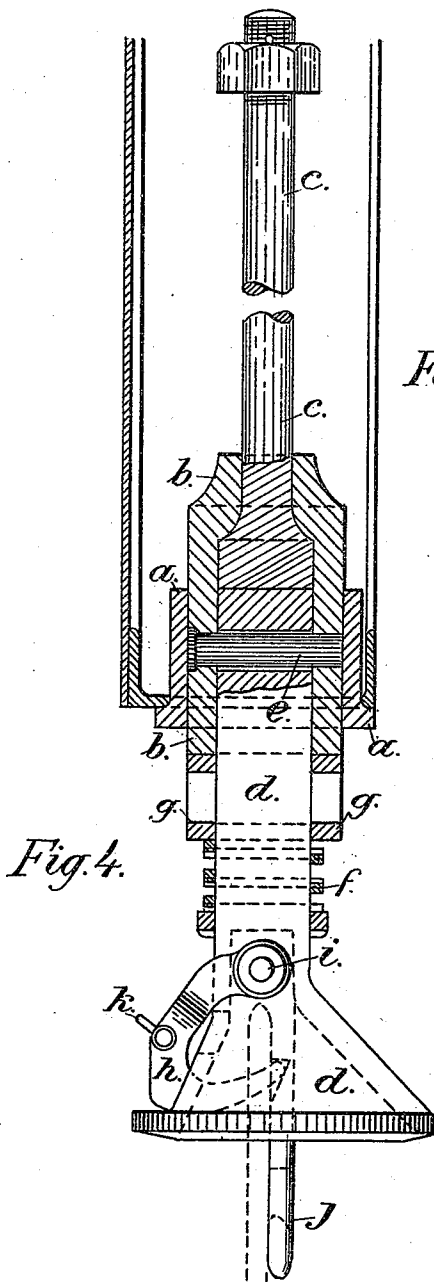


Fig. 4.

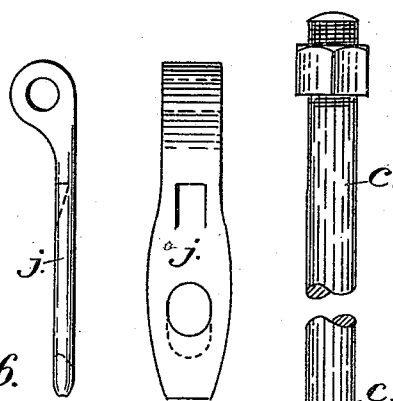


Fig. 6.

Fig. 7.

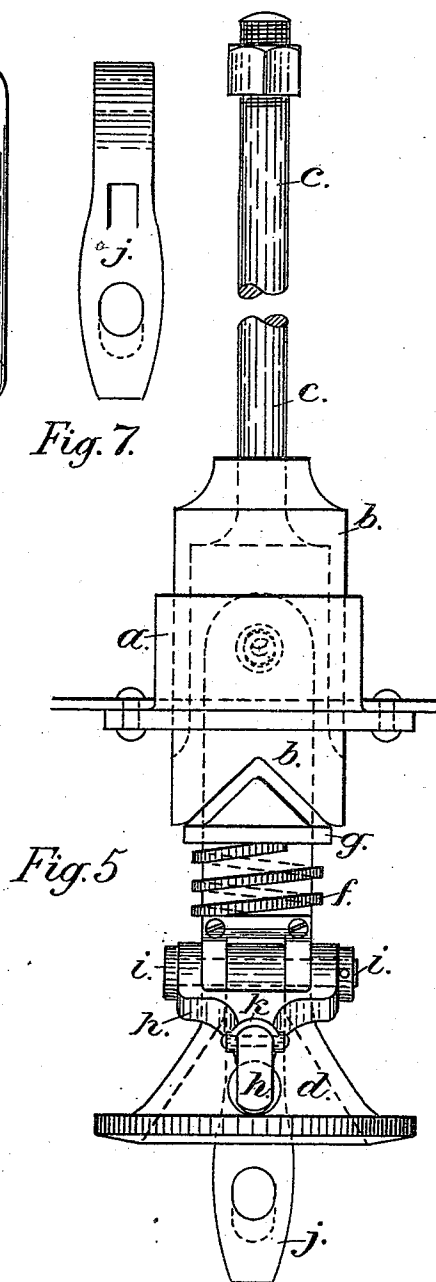


Fig. 5.

Witnesses:
N. G. Sandberg
E. C. Barker

Inventor:
George Johnston
by Fairfax & Metter
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE JOHNSTON, OF DURBAN, NATAL.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 510,028, dated December 5, 1893.

Application filed April 11, 1893. Serial No. 470,559. (No model.) Patented in Cape Colony August 27, 1892, No. 261, and in Natal November 9, 1892.

To all whom it may concern:

Be it known that I, GEORGE JOHNSTON, a subject of the Queen of the United Kingdom of Great Britain and Ireland, residing at Durban, Colony of Natal, South Africa, have invented certain new and useful Improvements in Car-Couplings, (for which I have obtained Letters Patent in Natal, dated November 9, 1892, and in Cape Colony, No. 261, dated August 27, 1892,) of which the following is a specification.

This invention relates to an improved automatic coupling buffer for railroad rolling stock, whereby railway vehicles may be automatically coupled together when brought in contact. Means are also provided for uncoupling from the side of the vehicles, to avoid sending a man between them.

Figure 1 is a side elevation showing the ends of two railroad vehicles each provided with a coupling buffer and uncoupling gear. Fig. 2 is a plan and Fig. 3 a face elevation of the uncoupling gear. Fig. 4 is an elevation (partly in section) of a coupling buffer, and Fig. 5 is a plan of the same. Fig. 6 is an elevation and Fig. 7 a plan of a coupling link.

In the drawings, a guide box *a* is secured in a central position to the end framing of a vehicle, in any convenient manner. The guide box *a* is bored or otherwise adapted to receive a socket *b* combined with a pulling bolt *c* secured in any known manner to the under frame. A squared buffer *d* is fitted within the socket *b* and connected therewith by a vertical pin *e* in such a manner that the buffer *d* is free to move through a horizontal arc upon the pin *e* as a center, a little play being allowed in the hole. The buffer *d* carries a spiral spring *f* and washer *g*, the latter being wedge shaped vertically and fitting correspondingly to the front portion of the socket *b*, which arrangement tends to keep the axial line of the buffer *d* quite central (through the action of the spring), while the pin *e* allows a slight radial movement thereof under pressure to adapt the parts to the curvature of the rails. The head of the buffer *d* is shaped as shown, and it carries a coupling hook *h*, forked at the bottom where it is pivoted to the horizontal pin *i*, the front

end of the hook passing through an orifice in the top of the buffer head, as shown in Figs. 4 and 5. The horizontal pin *i* also carries a pivoted coupling link *j*, having a slight depression on its upper face to receive the nose of the coupling hook *h*, which latter is lifted from that position by the shackle *k* and attached chain *l* when actuated by the uncoupling gear. The coupling link *j* with its depression, is so formed as to facilitate the sliding action of a similar link and coupling hook over its surface, when brought together for automatic coupling, and the shape of its pivoted ends tends to keep it (to some extent) in a horizontal position. The inner part of each buffer head is funnel shaped, thus facilitating automatic coupling by guiding each opposite coupling link into a central position, in a manner well known.

The uncoupling device consists of a bar *m* sliding in guides *n* mounted transversely on each vehicle end so as to be actuated on either side thereof by pulling or pushing either handle *o*. A lever *p* is pivoted to one of the guides *n*, and carries at its free extremity an eyebolt *q* whose circular shoulder rests in a V shaped cam depression made in the central part of the sliding bar *m*. On actuating the slide bar *m* by one of the handles *o*, the pivoted lever *p* is raised up from its lowest position to its highest (as indicated by dotted lines in Fig. 3) and holds the bar against vibratory movement by an inclined shoulder resting against the circular shoulder of eyebolt *q*. A small chain *l* connects the eyebolt *q* with the shackle *k* on the coupling hook *h*, and lifts the latter in uncoupling when actuated by the sliding bar *m*, as shown on the left side of Fig. 1.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. An automatic coupling having in combination a funnel shaped buffer head and turned body *d*, pivoted on vertical pin *e* to socket *b*, sliding in guide box *a*, spring *f* and wedge shaped washer *g*, pivoted coupling hook *h*, horizontal pin *i*, coupling link *j* operating substantially as and for the purpose herein shown and described.

2. An uncoupling device comprising in com-

bination a transversely arranged sliding bar *m* having a central cam depression, guides *n*, pivoted lever *p*, eyebolt *q*, chain *l*, coupling hook *h*, operating substantially as and for the purpose herein described.

5 3. In a coupling, a coupling link of a flattened tongue like shape, flat at the bottom and having a horizontal eye through the upturned root portion of the said link, a sunken
10 recess on the upper face, and a vertical coup-

ling hole through the outer end thereof, substantially as and for the purpose herein shown and described.

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

GEORGE JOHNSTON.

Witnesses:

E. V. SHEPSTONE,

EDW. H. CLEUMANZ.