

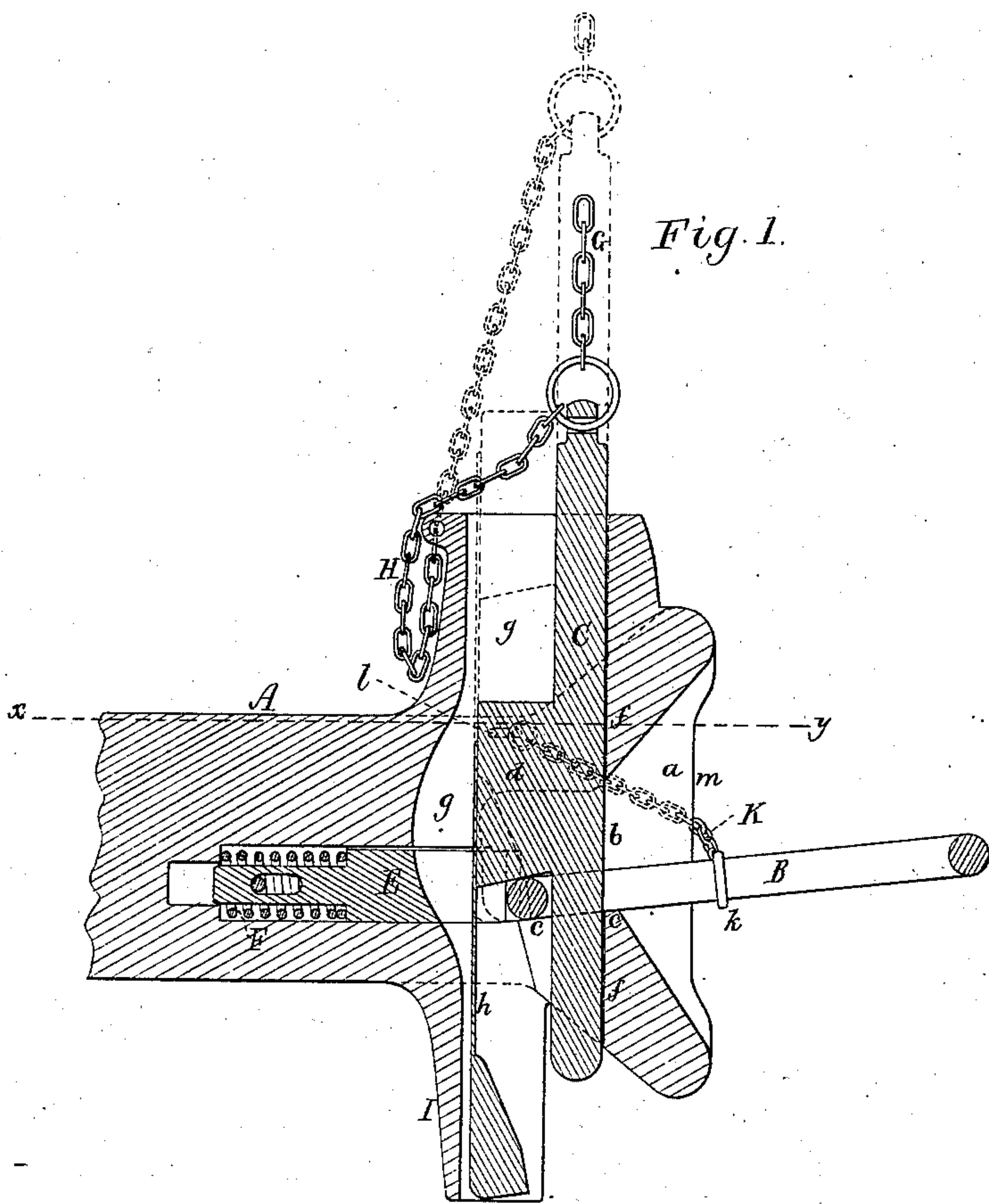
(No Model.)

D. L. RICHARDS.

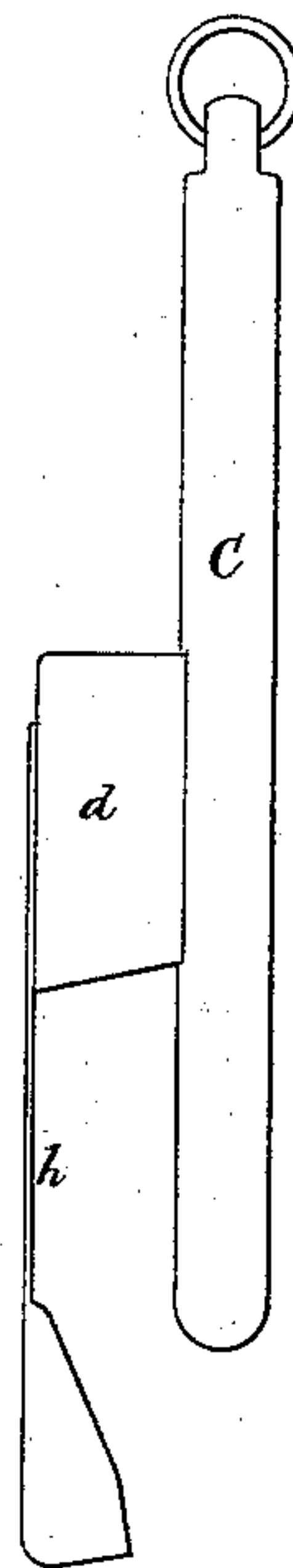
CAR COUPLING.

No. 312,657.

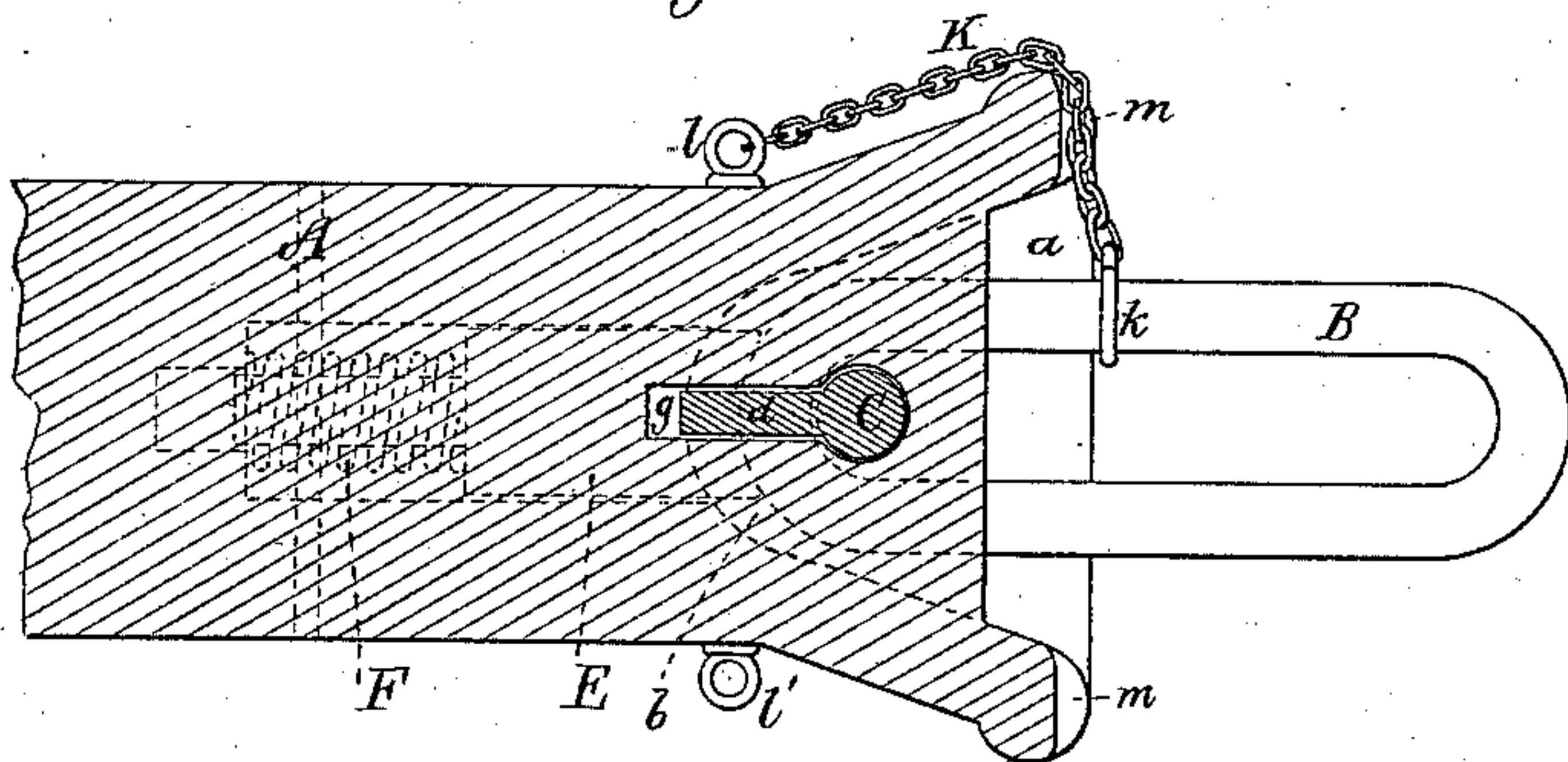
Patented Feb. 24, 1885.



*Fig. 3.*



*Fig. 2.*



Witnesses.

*S. N. Piper*  
*Ernest S. Pratt.*

Inventor.

*David L. Richards.*  
*by R. H. Eddy, atty*



# UNITED STATES PATENT OFFICE.

DAVID LAWSON RICHARDS, OF ST. JOHN, NEW BRUNSWICK, CANADA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 312,657, dated February 24, 1835.

Application filed January 10, 1835. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID LAWSON RICHARDS, of St. John, in the Province of New Brunswick, of the Dominion of Canada, have  
5 invented a new and useful Improvement in Railway-Car Couplings; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

10 Figure 1 is a vertical and longitudinal section, and Fig. 2 a horizontal and longitudinal section, of a draw-bar provided with my invention, the nature of which is defined in the claims hereinafter presented. The plane of  
15 section of Fig. 2 is on line  $xy$  of Fig. 1. Fig. 3 is a side view of a shackling-pin, its latch, and link-holder.

In such drawings the draw-bar A is shown as having in rear of its flaring or trumpet  
20 mouth  $a$  a recess or chamber,  $b$ , having its bottom inclined in manner as represented at  $c$ , such inclined bottom being for the coupling-link B to rest on, in order to bring such link into a proper position for coupling with  
25 another draw-bar. The coupling-pin shown at C has extending rearward from it a projection,  $d$ , which I term the "link-holder," such projection, when the pin is down through the link, being to rest on such link and hold it in its  
30 position on the inclined plane  $c$ . In the draw-bar head there is in rear of the shackling-pin passage  $f$  another passage,  $g$ , which is for the projection  $d$  and spring-latch  $h$ , extending down therefrom, to pass through.

35 In raising the pin to the position as shown by dotted lines, the latch springs forward and rests on the inclined plane  $c$ , and in so doing holds the pin elevated. On the link being forced into the chamber or recess  $b$  and against  
40 the latch, the latter will be crowded off the inclined plane, so as to allow the pin to drop and shackle the link to the draw-bar. At the back of the chamber  $b$  there is an auxiliary bunter, E, to play longitudinally in the draw-  
45 bar against a spring, F, arranged therein. This bunter is furcated so as to span the latch and not interfere with its movements, and is for the link to bring up against in order for the draw-bars to meet together when necessary.

50 To lift the coupling-pin, there is a chain, G, attached to its head, and there is also a supplementary chain, H, which is also connected to

the head of the pin and to the draw-bar. This latter chain is not only to determine the height to which the pin is to be raised, but to prevent  
55 it from being pulled out of the draw-bar.

To set the link of one car for coupling with the draw-bar of another car, the shackling-pin is to be dropped to extend through the link and cause the link-holder to rest thereon and hold  
60 it in an inclined position on the bottom of the link-chamber. The shackling-pin of the draw-bar, to receive the link on the cars coming together, is to be raised, so as to cause its latch to rest on the inclined plane below it. On the  
65 link being driven into the said draw-bar the latch will be forced backward off the inclined plane and the shackling-pin will drop through the link and shackle it to the draw-bar. From the draw-bar there extends downward a pro-  
70 jection, I, which is grooved or chambered vertically, so as to surround the latch when it is down, such projection being to serve as a guard to prevent the latch when down from being accidentally struck, injured, or bent by  
75 any object.

For the car-coupling as above described I have applied for a patent, the application having been filed on November 1, 1884. My  
80 present invention is an improvement with reference to it, or car-coupling, whose draw-bars are provided with flaring mouths to receive a coupling-link.

In carrying out my present invention I connect the link at or about at the middle of one  
85 side of it with the side of the draw-bar by a short chain attached to the draw-bar, and to the link at the middle of one side of it, or to a ring or collar to slide on the link, and to prevent the chain from being jammed and injured  
90 by the draw-bars when abutting together I provide the draw-bar with a recess or notch in the part of the abutting end, about which the chain extends in going from the link to the attachment or eye at the side of the draw-  
95 bar.

The draw-bar may have such a recess or notch in each upright part of its abutment or  
abutting end, and may also be provided with an eye to project from each side of it, (the said  
100 draw-bar,) in order that the chain may be attached to either side of the draw-bar, as may be most convenient.

In Figs. 1 and 2 of the drawings the link-



supporting chain is shown at K as fixed at one end to an eye, or a ring or collar, *k*, that slides or is fixed on the link, and at the other end to an eye, *l*, projecting from the side of the draw-bar. Another such eye is also represented at *l'* as extending from the opposite side of the draw-bar.

The recess or notch to prevent jamming of the link is shown at *m*, it being extended within the head of the draw-bar, nearly from the top to the bottom of the mouth thereof, as shown in Fig. 1. It may have a depth a little greater than the width of the chain, in order for the draw-bar to operate with another which may not be provided with such recesses. The chain serves to prevent loss of the link in case of accidental raising of the shackling-pin out of it.

It should be observed that with a link and draw-bar thus connected by a chain the coupling-pin that holds the link to the draw-bar should not be raised for uncoupling two cars when connected by the link, for in such case the cars would still be coupled by the link and chain, and the latter would be liable to be broken on one car being drawn away from the other. The link-pin of the other car, or that of the draw-bar in which the link is held to the draw-bar only by a pin, is the one to be raised to effect uncoupling of the two cars.

Generally speaking, my present improvement is to be applied to one only of the draw-bars of a car, though it may be used with each of them, if desirable.

I herein make no claim, in a car-coupling, to the shackling-pin provided with a link-holder

and latch, as described, and the draw-bar having in rear of its flaring mouth a chamber provided with an inclined bottom, such draw-bar also having in it passages for the shackling-pin and its link-holder and latch to move in, as explained; nor do I herein claim the furcated auxiliary bunter and its spring, nor the grooved or chambered projection *I*, in combination with the draw-bar chambered and provided with the shackling-pin and its link-holder and latch, as set forth, such being in whole or in part subjects of claims in my application for a patent filed November 1, 1884.

I claim—

1. The draw-bar notched or recessed in the abutment of its mouth and connected to the coupling-link by a chain attached thereto and to one side of the draw-bar, the notch or recess in the abutment of the mouth of the draw-bar being for the chain to pass through, and to prevent such chain from being jammed when the draw-bar may abut against another draw-bar in the process of shackling together their cars, all being substantially as explained.

2. The draw-bar notched or recessed in each of the opposite upright parts of the abutment of its mouth, and connected to the coupling-link by a chain attached thereto and to one side of the draw-bar, such draw-bar also having at its opposite side an eye for connecting the chain thereto when desirable.

DAVID LAWSON RICHARDS.

Witnesses:

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