

D. G. KITZMILLER.
 DRAW BAR SAFETY DEVICE.
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933,078.

Patented Sept. 7, 1909.

Fig. 1.

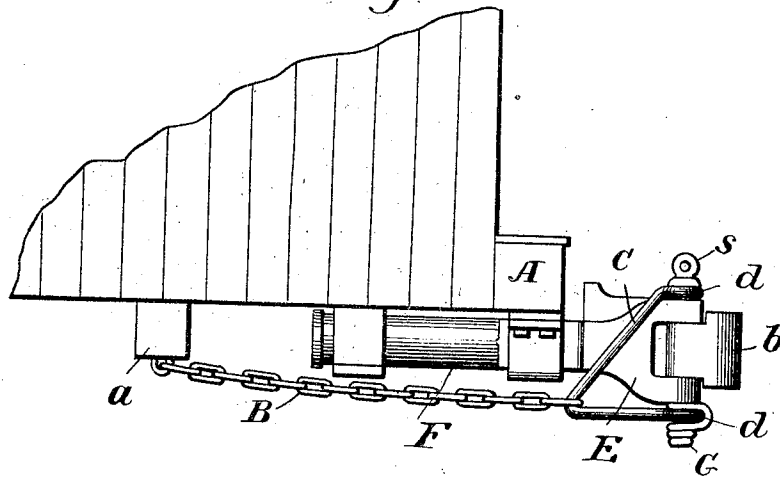


Fig. 2.

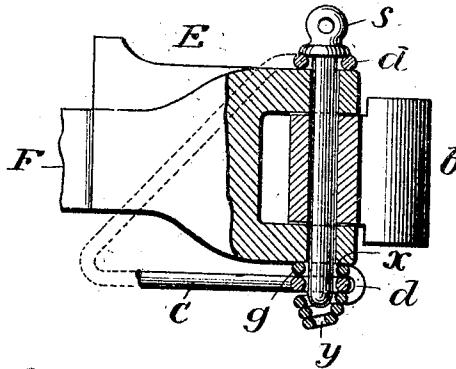
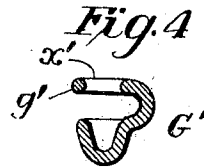
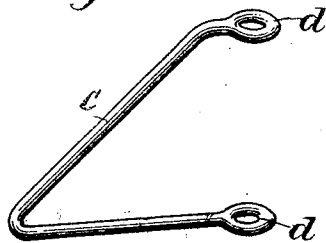


Fig. 3.



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UNITED STATES PATENT OFFICE.

DIXON G. KITZMILLER, OF HARRISBURG, PENNSYLVANIA.

DRAW-BAR SAFETY DEVICE.

933,078.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DIXON G. KITZMILLER, a citizen of the United States, residing at Harrisburg, in the county of Dauphin, State of Pennsylvania, have invented certain new and useful Improvements in Draw-Bar Safety Devices, of which the following is a specification.

My invention relates to means for preventing accidents resulting from breaking of draw-bars, and my invention consists of a safety device comprising a yoke adapted for connection with a draw-head by means of a knuckle-pin and a chain connected with the yoke and at the opposite end with a stationary part of the car, together with means supported by the yoke for preventing the dropping of the knuckle-pin in case it breaks, as fully set forth hereinafter and as illustrated in the accompanying drawing, in which:

Figure 1 is a view illustrating my safety device applied to the coupling appliance of a car; Fig. 2 a view in section through the draw-head; Fig. 3 a perspective view of the safety device; Fig. 4 is a sectional view showing a modified form of pin-support.

The draw-bar F is suitably mounted, as usual, beneath the platform A of the car and carries the draw-head E, of any suitable construction, provided with a knuckle *b* and its locking means, not shown, the said knuckle being pivoted to the draw-head by a bolt *s* which is preferably somewhat longer than the ordinary bolts in order that it may project above and below the draw-head.

To the framework of the car at any suitable point, as to one of the cross-beams *a*, is firmly connected the inner end of a draft chain B the outer end of which is attached to a yoke C, the diverging arms of the yoke terminating in the eyes *d*, and the yoke being so constructed and proportioned that it may be applied to the draw-head with one arm above and the other below the draw-head in position for the passage of the bolt *s* which thus serves to lock the yoke to the draw-head as well as to lock the knuckle in place. The chain B is of such length that it will in no way restrict the usual or normal movements of the draw-bar and draw-head, but any movement of the draw-head beyond its normal extent longitudinally will cause a stress to be applied to the chain so that even if the draw-bar should become stretched the draft strain will be borne at least in part by

the chain B and the danger of fracturing the draw-bar or its attachments will thus be avoided or greatly reduced.

In case of breaking of the draw-bar the draft will of course come upon the chain B, thereby preventing, in most instances, the dropping of the draw-head unless the fracture should occur close to the draw-head, and even in such case the chain serves to hold the draw-head in such close relation to the other parts that it will remain in a coupled connection with the opposing draw-head and prevent accident. After the breaking or undue elongation of the draw-bar is discovered the cars may yet be held in a coupled position by removing the bolts *s* of both of the coupled draw-heads and connecting the yoke C to the draw-head of the opposing car by means of its bolt *s*.

The yoke C may also be made the means of using a support G which serves to hold the lower portion of the pin *s*, in case of the fracture of the latter, at any point between its ends. Thus, as shown, the said support consists of a thimble with a socket *y* which will receive the lower end of the pin *s* but not allow the same to pass, and this thimble has a bracket *g* adapted to extend over the top of the lower fork of the yoke C, and with an opening *x* through which the pin can pass, the parts then keeping the position shown in Fig. 1. If the pin should break at any point between its ends the lower portion will still be held in place by the support G which itself is held in place upon the yoke C by the pin.

The support may be made by coiling a strip of metal, as shown in Figs. 1 and 2, or it may consist of cast metal having a socketted portion G' and an overhanging arm *g'* with a perforation *x'* as in Fig. 4.

In using the term "draft" in connection with the word "chain" I intend to emphasize the character of this chain which is of such a strength and so connected to the platform or frame of the car that it will serve as a coupling or connection between cars when the draw-head is broken. That is, it is of such strength that it will couple the cars together and is not a mere support for retaining the yoke C in connection with the car to avoid loss of the yoke.

Without limiting myself to the construction shown, I claim:

1. A safety device for draw bars having draw-heads and pivoted knuckles consisting

of a draft chain, means for connecting the same at one end with the frame of a car, and a yoke connected to the chain at the opposite end and having perforated ears adapted to receive and support the pivot pin of the draw head above and below the latter.

2. The combination with a car frame, draw bar, draw head and its knuckle and pivot pin, of a yoke having perforated ears to receive and support said pin above and below the draw head, and a draft chain connected at one end to the yoke and at the other to the car frame.

3. The combination with the draw-head, knuckle and knuckle-pin, of a yoke perforated at the ends to receive said pin, and a pin support adapted to receive the lower end of the pin and having a bracket adapted to rest on the lower fork of the yoke and perforated for the passage of the pin.

In testimony whereof I affix my signature in presence of two witnesses.

DIXON G. KITZMILLER.

Witnesses:

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