(No Model.)

C. E. McINTOSH.

DRAW BAR FOR RAILWAY CARS.

No. 341,932. Patented May 18, 1886.

Fig. 1.

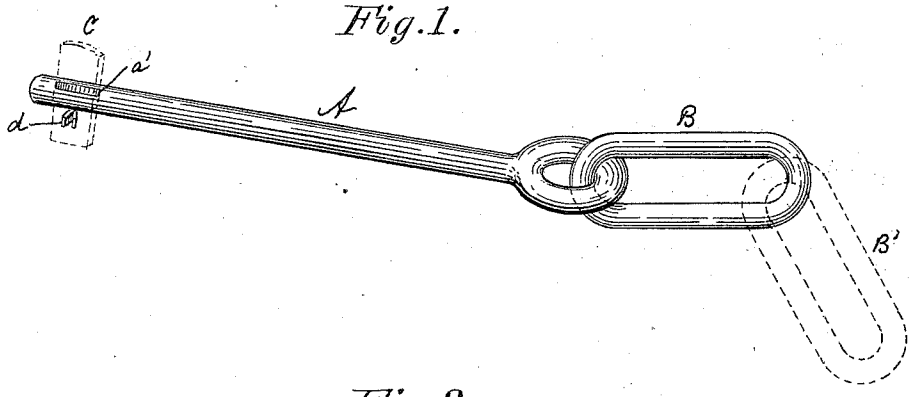
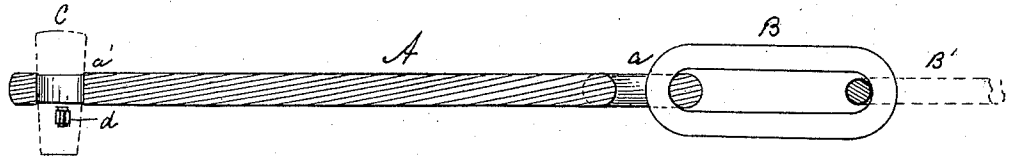


Fig. 2.



Witnesses,
J. M. Dolan
Fred. B. Dolan.

Inventor.
Charles E. McIntosh
by his attys
Clarke & Raymond.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES E. McINTOSH, OF WILMINGTON, MASSACHUSETTS.

DRAW-BAR FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 341,932, dated May 18, 1886.

Application filed April 2, 1885. Serial No. 160,977. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. McINTOSH, of Wilmington, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Temporary Draw-Bars for Railway-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

Freight-cars are usually coupled by the link and pin; or, if there be another kind of coupling, they are provided with an arrangement by which the link-and-pin method of coupling can be used.

The manner in which the link-and-pin coupling is applied to cars is by means of what is called a "draw-bar," which consists of a "stem" and "draw-head," the draw-head being a recess in an enlarged projection at one end of the stem, into which recess a coupling-link is placed, the walls of which recess above and below the link are provided with holes, through which a pin is passed transversely to the link. The stem of this draw-bar passes through guides or straps below the car, and usually has a spring around it abutting at the forward end against the guides, or against a projection from the car, as the case may be, and at the inner end of the stem is a keyway, through which is passed a key that bears against the spring. When a draw-bar is broken, the cars have to be "chained up," as it is called—that is, a chain is fastened by one of its ends to a car in which the draw-head is not broken, and to which the car with the broken draw-head is to be attached, and this chain is carried under the car having the broken draw-head and passed around the bolt which connects the car with the truck, and then brought out to the end of the car and attached to the adjacent car in which the draw-head is not broken. It will be seen that this chaining-up business must necessarily be slow, inconvenient, and, in bad weather, a very uncomfortable job, and that the position into which it is necessary for the train-hand to get (beneath the car) is one which is so awkward as to deprive him of an opportunity to exert his strength to advantage. Such a job of chaining up often takes him from five to ten minutes, or more, and involves by this detention a serious loss, because all the men on the train and the engine lose their time on account of this delay. The ordinary draw-bar with its draw-head is so cumbersome that it is practically impossible to carry any of them with the train, and, besides, they vary considerably in size of their stems, and also they are very heavy, so as not to be adapted to quick work in the operation of repairs upon the road, and it is considered best to make use of this makeshift of chaining up.

This invention relates to an apparatus for temporary repair, and is called a "temporary draw-bar."

It consists of an eyebolt and one or two short links of chain coupled thereto, the eyebolt being about eighteen or twenty inches long, and slotted for a key at the end opposite the eye. It is to be applied in the same housing or guides in which the ordinary draw-bar is employed, and in order to employ it the broken draw-bar is to be removed from its housing or guides and thrown one side, and this temporary bar put into its place and coupled in the usual way to the draw-head of the adjacent car.

In the drawings, Figure 1 is a perspective, and Fig. 2 a longitudinal section, of the apparatus.

A is an eyebolt about eighteen or twenty inches long, and made of about one-and-a-half-inch good bar-iron. At one end is the eye *a*, and at the other end is a keyway, *a'*. Through the eye is placed a short welded link, B, and to this short welded link B is linked another link of about the same size, B'. A key, C, when the bar is in position in the housing, is passed through the slot *a*, and this key is prevented from being withdrawn by being slightly wedge-shaped, as shown in Fig. 2, and having a hole in it near its smaller end, through which a spring split key, *d*, is passed, to prevent the key C from being withdrawn from the slot *a*.

From the fact that the stem of the draw-bar commonly in use varies in length from eighteen inches to two feet, and from the fact, also, that with various of the automatic couplings in use the position of the engagement of the pin with the link may be considerably nearer or considerably farther away from a car in

some cases than in others, and from the fact, also, that cars differ considerably in the heights of their sills, it is quite desirable to have a jointed connection in this temporary apparatus for chaining up.

Links as at present in use are of various lengths, some of them straight and some of them crooked in the middle, so as to accommodate different heights of cars; but this temporary make-shift is intended to serve its purpose under all conditions where there is a pinway to attach a link to on one car, and where there is a set of guides on the other, which is practically a universal condition.

Of course I do not confine myself to any exact dimension of parts; but so far as my experience has gone a draw-bar of this construction made of inch-and-a-half iron, having a shank about twenty inches long from keyway to eye, and having the slot for the keyway about such as would take a taper key two and a half inches wide at one end and one and a half inch wide at the other, and half an inch thick, with the eye at the other end about three inches in diameter, is about the best size for the eyebolt; and to this eyebolt there should be attached through the eye a couple of links, one engaged with the other, and each about five and a half or six inches long and two inches across on the inside, made of inch-and-a-quarter iron. With this construction a considerable difference in slack between the cars can be provided for, and much less care is requisite in starting the train with such a temporary coupling as this than is required when a chain is used, the links of which of course are made of much smaller iron, and the strain upon which is exerted in a much more inconvenient manner, and where, in picking up the train, great care has to be used in bringing the chain taut lest it should be broken by the shock of taking up the slack.

I am aware of the Kendrick patent, No. 152,648, June 30, 1874, for a swivel-coupling consisting of a pin, a turn-buckle, a screw, eyebolts, a link adapted to be inserted in a draw-head housing and keyed to the loops which sustain the usual draw-bar, which contains at least four, and more—usually six—pieces, viz: first, the turn-buckle; second, the "pin;" third, the key through the pin; fourth, the screw-eyebolt; fifth, the jam-nut, and, sixth, the linkage, while this apparatus of mine has only three—first, the eyebolt, doing the service of the turn-buckle, pin, and eyebolt of the Kendrick device, so far as draft is concerned; second, the key, and, third, the linkage.

By making my linkage in two or more links, as shown, the slack can be adjusted as well for practical purposes as turn-buckles, and the contrivance is cheaper.

I claim as my invention and desire to secure by Letters Patent of the United States—

A temporary draw-bar consisting of an eyebolt with a long shank, having a keyway at one end and an eye at the other, in combination with the key *e* and a coupling linkage of two or more links welded through the eye, and adapted to be engaged with the coupling-pin of an adjacent car, all substantially as described.

CHARLES E. McINTOSH.

Witnesses:
J. M. DOLAN,
FRED. B. DOLAN.