(No Model.)

J. RHULE.

CAR COUPLING.

No. 278,598. Patented May 29, 1883.

Fig. 1.

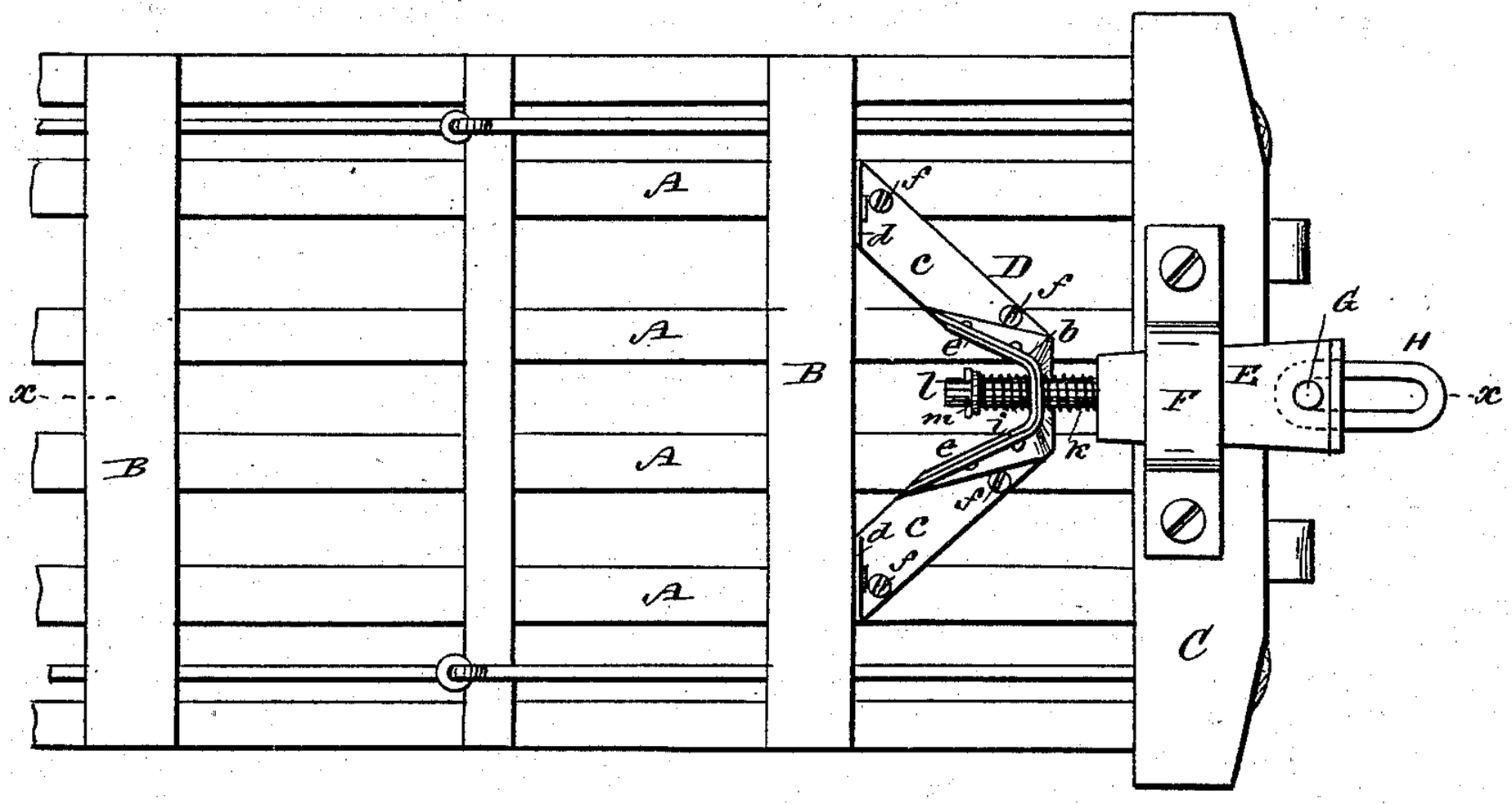


Fig. 2.

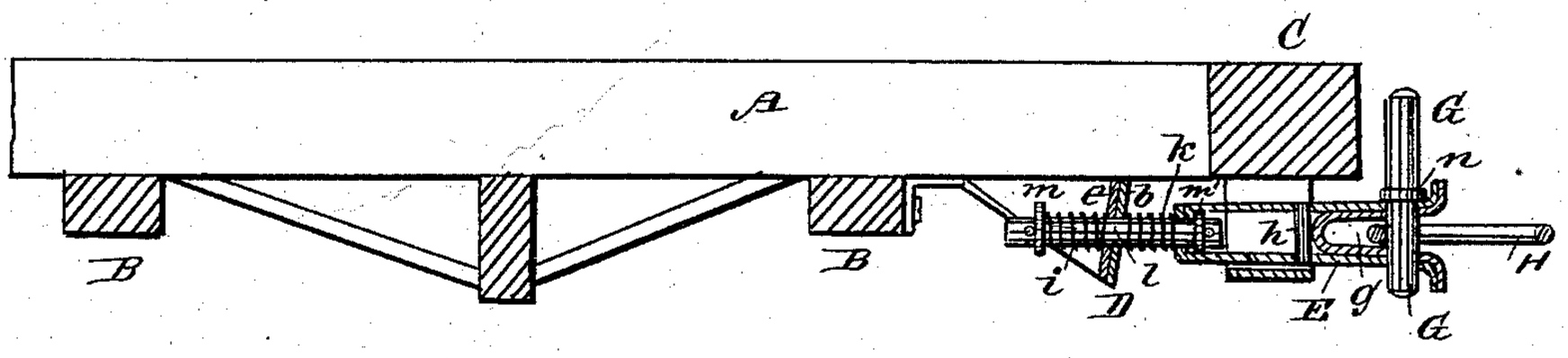
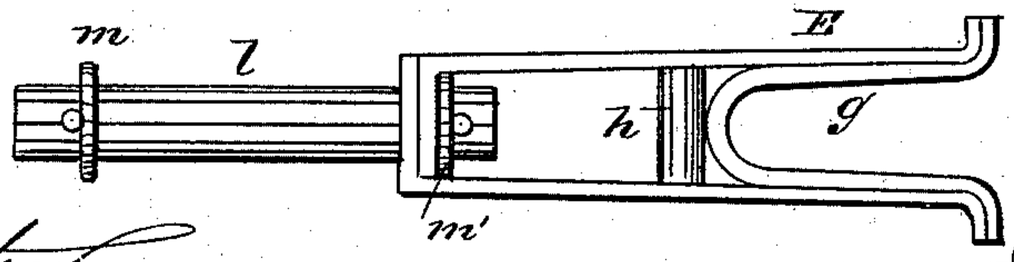


Fig. 3.



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JACOB RHULE, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOHN HERMAN JANTZEN, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 278,598, dated May 29, 1883.

Application filed January 24, 1883. (No model.)

To all whom it may concern:

Be it known that I, JACOB RHULE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Draft and Draw-Head Attachments for Railway-Cars, of which the following is a full, clear, and exact description.

This invention consists in a special construction of a metallic draft device, and combination of the same with the bolster and longitudinal timbers of the base or lower frame of the car-body; likewise in a peculiar construction of the draw-head connected with the fixed draft device, and combination therewith of springs to resist both push and pull; and in a reversible coupling-pin.

By said invention much timber is saved in the construction of the draft, a stronger draft attachment is obtained, labor is economized in making the attachment, and the whole draft-connection is cheaper and more durable; also, follower-plates may be dispensed with for the springs, as likewise a large number of bolts, cars may be coupled while standing without risk of injury to life or limb, and the same coupling-pin, if broken, may be utilized by reversing it, thus saving metal and affording great convenience.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents an inverted plan of the lower frame, in part, of a railway-car body. Fig. 2 is a vertical longitudinal section of the same, not inverted, on the line *x x* in Fig. 1; and Fig. 3, a side view, upon a larger scale, of the draw-head with its attached draft-pin.

A A in the drawings indicate the usual four intermediate longitudinal timbers of the lower frame or base-piece of a railway-car body; B B, the usual bolsters, and C the usual rail at either end of said frame.

D is a fixed metallic draft device applied to either end of the car-body or lower frame thereof. This device is formed in part of a plate or strip bent to form a front turned-down portion, *b*, laterally-spreading horizontal portions *c c*, and downwardly-turned rear end flanges, *d d*, the whole forming an angular brace, converging in front. This fixed angular draft device is constructed with a metal lining, *e*, of like width and thickness, or thereabout, applied to the turned-down portion *b* of it, to give it increased strength, and is secured by bolts or screws *f* through its horizontal portions *c c* and end flanges, *d d*, to all four intermediate longitudinal timbers, A A, and either bolster B, whereby much greater security and strength are obtained.

E is the draw-head, which is or may be the same at either end of the car. This draw-head is constructed without a shield, and with open sides and mouth, and with a metal lining, *g*, in its mouth, bent or folded over in the rear to give shape and limit to the mouth and strength to the draw-head generally. It is also further stiffened by a connecting pin or brace, *h*, in rear of the lining *g*. Said draw-head E is supported by a strap, F, on the end rail of the frame, and is free to move back and forth, subject to the control of springs *i k*, arranged around a draft-pin, *l*, that freely passes through the back end of the draw-head, and through the front portion, *b*, of the draft device D. One of these springs *i k* is arranged back of the forward portion, *b*, of the draft device, and rests at its inner end against a collar or washer, *m*, on the draft-bar *l*, that is restrained by a similar collar or washer, *m'*, on its outer end in advance of the portion *b* of the draft device D. This spring *i* serves to resist pull on the sliding draw-head E, and the spring *k* to resist push thereon. By this arrangement but two springs are necessary, and followers, as also buffers, may be dispensed with, and the cars may be coupled while standing without endangering the fingers of the operator.

G is the coupling-pin, arranged, as usual, to pass through apertures in the mouth end of the draw-head to engage with the coupling-link H. This coupling-pin is made of sufficient length, and with a collar or swell, *n*, in the middle of its length, to admit of its being reversed in case of breakage of one of its projecting portions on either side of the collar *n*, thus affording great convenience as compared with using an independent or separate coupling-pin, in case of breakage, and such double and reversible coupling-pin taking much less metal than separate pins do.

Having thus fully described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination, with the intermediate longitudinal timbers, A, and bolster B, near either end of the base-piece or lower frame of the car-body, of the bent angular metallic draft device D, having a turned-down forward portion, *b*, laterally-spreading horizontal portions *c c*, and turned-down rear end flanges, *d d*, for attachment to said intermediate timbers and bolster, substantially as specified.

2. The angular draft device D, bent and constructed to converge in front, and having a forward turned-down portion, *b*, in combination with the metallic lining *e*, applied thereto, essentially as described.

3. The combination, with a draw-head having the cross-bolt *h*, of a doubled metallic lining, *g*, supported at the rear against said bolt and flared outwardly in front of the upper and lower plates, as shown and described.

4. A car-coupling draw-bar having an upper and lower plate bent at the rear into right-angled lapping flanges connected by the draft-rod which passes through them, as shown and described.

5. The reversible double coupling-pin G, having a collar or swell, *n*, intermediately of its length, for use substantially as specified.

6. The combination of the angular fixed metallic draft device D, the sliding draw-head E, the draft-bar *l*, and the springs *i k*, essentially as shown and described.

JACOB RHULE.

Witnesses:
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