(No Model.)

H. MERZ.

CAR COUPLING.

No. 251,619. Patented Dec. 27, 1881.

Fig. 1.

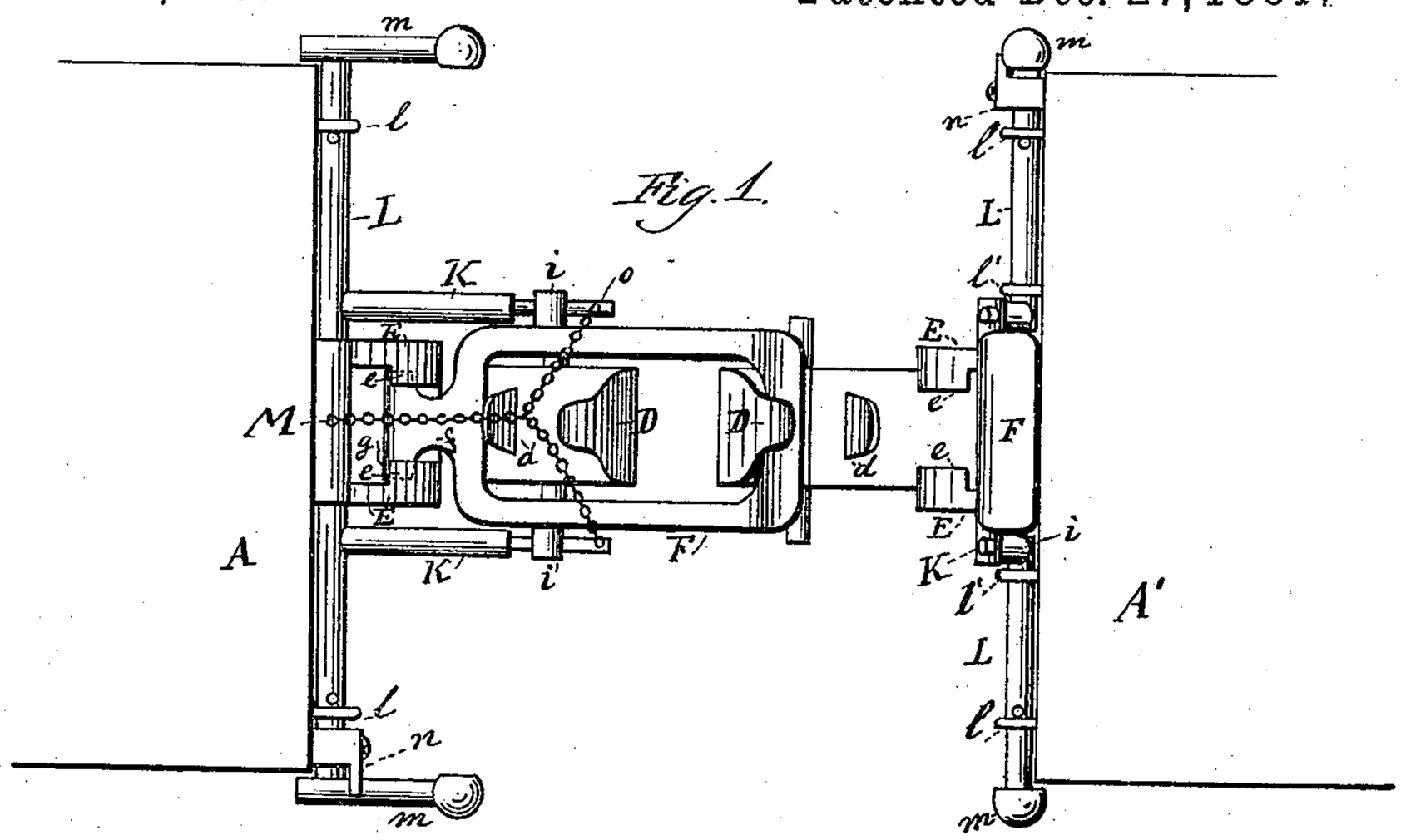


Fig. 2.

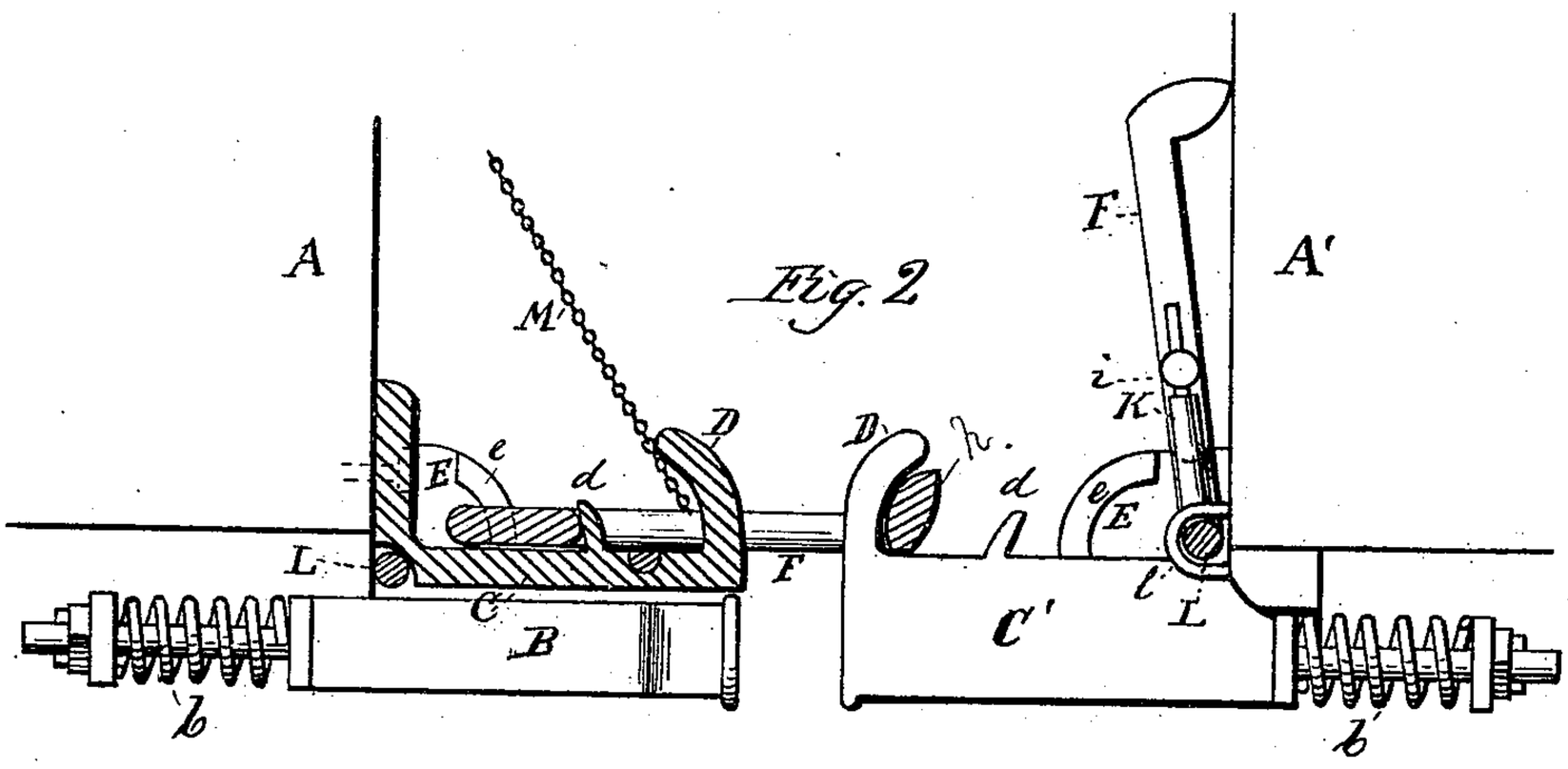


Fig. 3.

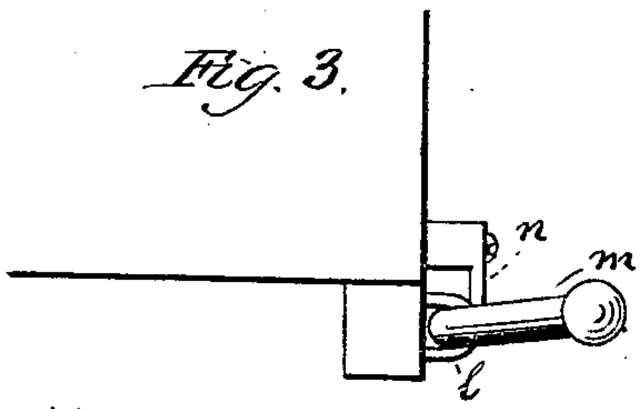
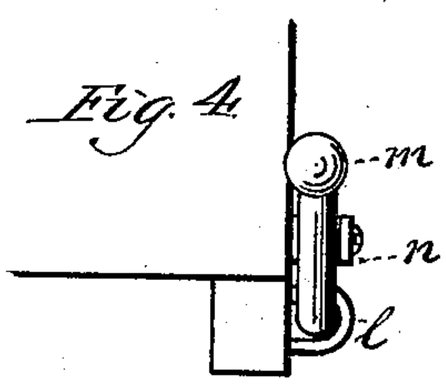


Fig. 4.



WITNESSES.

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HENRY MERZ, OF MILWAUKEE, WISCONSIN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 251,619, dated December 27, 1881.

Application filed May 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY MERZ, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a certain new and useful Improvement in Car-Couplings, of which the following is a specification.

The object I have in view is to produce a car-coupling that can be connected to and disconnected from the sides or top of the car and will not necessitate the train-man to step between the cars to be coupled or uncoupled, thus preventing the frequent accidents connected with that service.

My invention consists in the peculiar devices and combinations of devices employed by me for this purpose, as fully hereinafter explained, and pointed out by the claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a plan of the coupling; Fig. 2, a sectional side elevation; and Figs. 3 and 4, elevations showing the several positions of the hand-crank by which the coupling is thrown and held into and out of connection.

Like letters denote corresponding parts in all the figures.

A denotes the end of the body of one car, and A′ the end of the body of another car, both car-bodies being provided with my improved coupling, with the only difference that to the car-body A the draw-head and the car buffer or bumper are attached separately and so as to be independent of each other, while to the car-body A′ a draw-head of my construction is attached that at the same time will act as a buffer or bumper.

I shall now first describe the draw-head as attached to car-body A, where B represents the buffer or bumper, which is connected in the usual manner, and is provided with a spring, *b*, to sustain the surge of the cars against each other whenever the speed of the train is checked.

C is the draw-head plate, which, with its end flange, is secured by bolts against the end of the car-body. This plate C is provided with a horn, D, to its front end, which is to engage with the coupling of the other car, with a shoulder-flange, *d*, for resisting the strain of its own coupling-link, and with two segmental ribs, E, strengthening the connection between the coupling-plate C and the flange *d*, and having segmental rim-projections *e*.

F is the link, which is a rectangular frame having extension *f*, with trunnions *g* at its rear, and with its front or coupling end, *h*, enlarged and swaged out somewhat to a bevel, and so as to bear with a broad surface against the horn D of the opposite draw-head. The trunnions *g* of this link are placed between the segmental ribs E and behind the segmental rim-projections *e*, which latter are only carried from the horizontal part of the way up—far enough to leave an opening for vertically sliding the trunnions *g* behind these segmental rim-projections *e*. To each side of the link is formed an eye-loop, *i*, and through these are passed the ends of two arms, K, of a shaft, L, which, by means of staples *l* or other suitable means, are pivoted transversely against the end of the car. Upon these arm ends K the link F can slide, so as to accommodate itself to its draw-head shoulder-flange. The ends of the shaft L reach to the side corners of the car, where they are provided with cranks *m*, by which the coupling-link is raised from a horizontal to a vertical position, or vice versa, for disconnecting or connecting it with the draw-head of the adjoining car, and by a turn-buckle, *n*, pivotally secured against the end of the car-body. Said crank *m* can either be secured in a vertical position, as shown in Fig. 4, for holding the link out of contact, or, after the cars have been coupled, the link may be securely held in a horizontal position by turning the turn-buckle end down upon the cranks *m*, as shown in Fig. 3.

For coupling or uncoupling the link from the top of the car, the ends *o* of a chain, M, are connected with the ends of arms K, which chain M is to be in reach of the brakeman from his seat.

Attached to car A′, I have shown a draw-head, C′, of my construction when forming part of the bumper or buffer B, in which case the shaft L will not be continuous, but will be formed in two independent parts, each with one arm, K, and one crank, *m*, when two extra staples or bearings, *l′*, will be required for sustaining said shafts L.

Although each draw-head is provided with

a link, only one or the other is required for coupling the two draw-heads, thus having the other one in reserve in case of a breakage or damage; and, if two cars are to be coupled the draw-heads of which are of different elevations, the link of the uppermost draw-head should be used for making the connection. The strain of the pull of the coupling-link will be against the shoulder-flange *d* of the draw-head to which said coupling-link is attached.

As will be seen, such a coupling cannot be influenced in its operations by snow or ice, is easily under observation as to its wholesome condition, a broken link can be at once replaced by simply sliding out one and inserting another, and cannot get out of order very well. It is cheap of cost and is easily put on a car. No accidents need occur with coupling or uncoupling the cars provided with my improvement.

What I claim as my invention is—

1. The draw-head C, having horn D, shoulder-flange *d*, and ribs E, with flanges *e*, in combination with a coupling-link, F, having trunnions *g*, substantially as and for the purpose set forth.

2. The draw-head C, having horn D, in combination with the link F, having eye-loops *i*, and the shaft L, having arms K and cranks *m*, all substantially as described and shown.

3. The combination, with the draw-head C, having horn D, and ribs E, with flanges *e*, of the link F, having trunnions *g* and eye-loops *i*, and of the shaft L, having arms K and cranks *m*, all substantially as and for the purpose specified.

4. The combination, with the draw-head C, having horn D, shoulder-flange *d*, and ribs E, with flanges *e*, of the link F, having trunnions *g* and eye-loops *i*, and of the shaft L, having arms K and cranks *m*, all substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of May, 1881.

HENRY MERZ.

Witnesses:
F. W. KASEHAGAN,
OLIVER W. MARBLE.