

E. O. RICHARD.
CAR-COUPLING.

No. 182,475.

Patented Sept. 19, 1876.

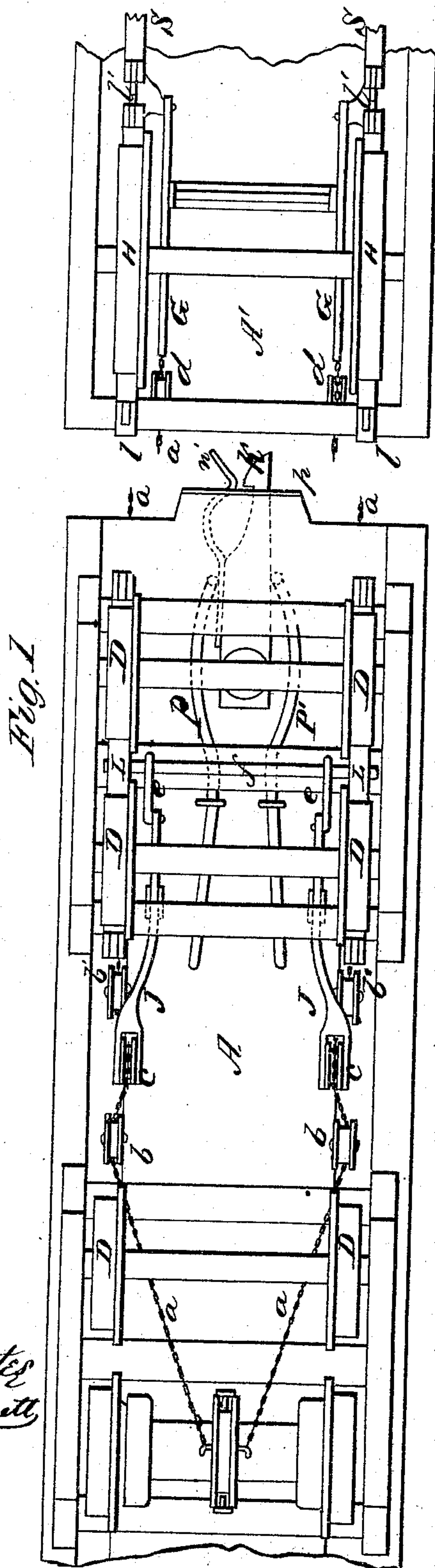


Fig. 1

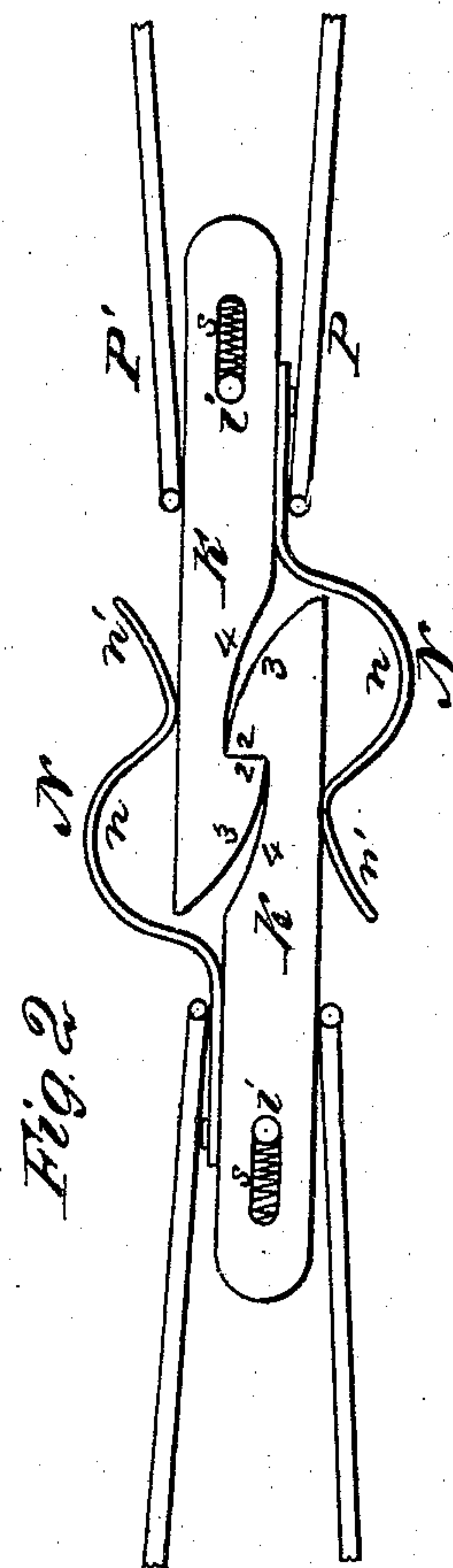


Fig. 2

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Fig. 3.

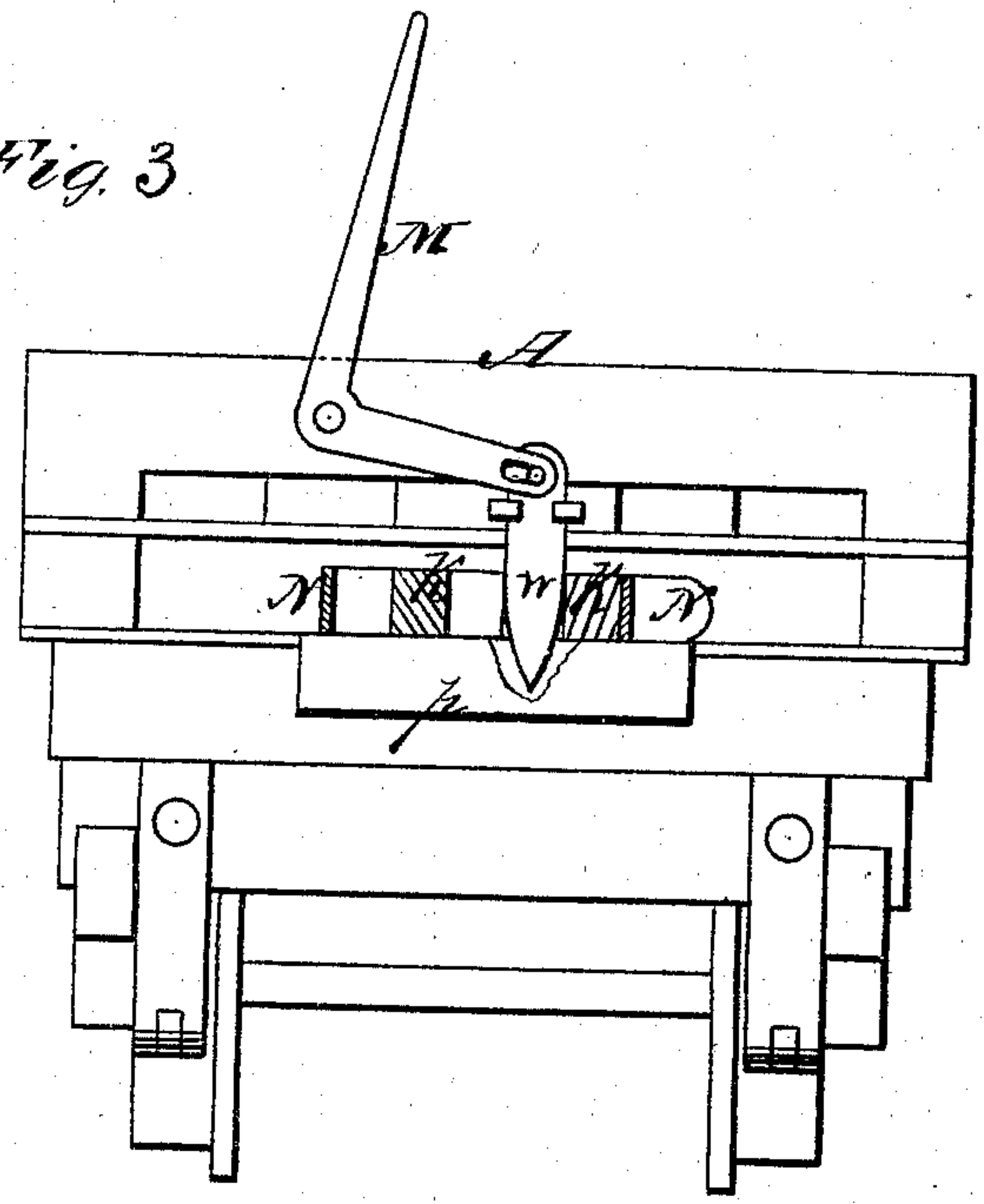
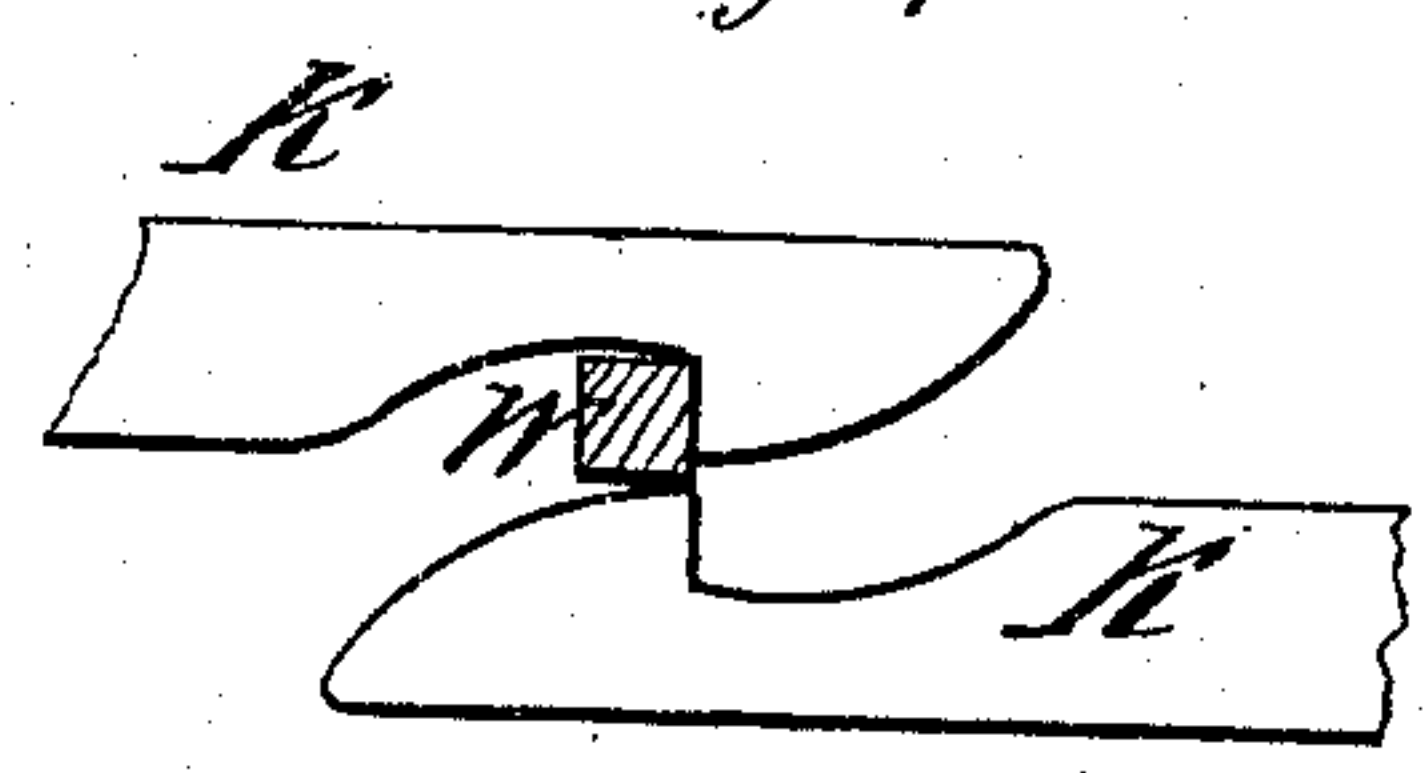


Fig. 4.



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UNITED STATES PATENT OFFICE.

EDMOND O. RICHARD, OF QUEBEC, QUEBEC, CANADA, ASSIGNOR OF PART OF HIS RIGHT TO JEAN E. RICHARD, OF COLUMBIA, SOUTH CAROLINA AND JOSEPH C. RICHARD, OF QUEBEC, CANADA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 182,475, dated September 19, 1876; application filed August 1, 1874.

To all whom it may concern:

Be it known that I, EDMOND O. RICHARD, of Quebec, in the province of Quebec and Dominion of Canada, have invented a new and valuable Improvement in Automatic Couplers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my car-coupler. Fig. 2 is a detail, Fig. 3 an end view, and Fig. 4 a detail view, of the same.

This invention has relation to automatic couplers and uncouplers for cars; and it consists in coupling-hooks having lateral play, in combination with curved spring-guards, which, with the hooks, will yield laterally and allow an uncoupling of the cars should a car leave the track. It also consists in the combination of a vertically-movable wedge with the coupling-hooks, whereby these hooks can be pressed apart to effect an uncoupling. It finally consists in combining with the coupling-hooks inclined lifters, which will properly direct the hooks together and insure an engagement of the same when cars are moved together, as will be hereinafter explained.

The following is a description of my improvements:

In the annexed drawings, K K designate two coupling-hooks, one of which is applied beneath the platform of each car, and suitably connected thereto, so as to receive free lateral play about pivots *i i*. The hooks are also allowed some endwise play by means of springs *s s*, which prevent shocks in starting a train. Each hook is formed on a straight draw-bar, and consists of a hooking-face, 2, a convex-beveled face, 3, and a notch or score, 4, as clearly shown in Fig. 2.

To the hooked edge of each hook K I pivot a guard, N, which is allowed lateral play, but which is confined in the position shown in

Fig. 2 by means of a spring, P, which is counteracted by a similar spring, P', pressing against the back of the hook. The front part of the guard N is bowed at *n*, and its front end is directed outward away from the hook, forming at *n'* an angle which bears against the back of the hook on an opposite car when a coupling is made.

Should a car leave the track, the lateral displacement consequent thereto will cause the backs of the hooks to press apart the guards N N, and allow a disengagement of these hooks. At the same time the brakes will be applied to the wheels, and the disabled car will operate as an anchor to the other cars in the train. A lifting-plate, *p*, which is secured to the platform beneath the hooks, will direct the hooks properly in an engaging position while making a coupling.

To uncouple the hooks by hand I use a vertically-sliding wedge, W, which is arranged so that, when it is depressed by means of a lever, M, it will spread the hooks so far apart that they will be disengaged, as indicated by Figs. 3 and 4. Other means may be adopted for disengaging the hooks.

What I claim as new, and desire to secure by Letters Patent, is—

1. Coupling-hooks K K, in combination with curved guards N and springs P P', substantially as described.

2. The coupling-hooks K K, in combination with the curved guards N N, springs P P', wedge W, and stationary lifter *p*, substantially as and for the purpose set forth.

3. The stationary lifter *p*, made in one piece, having its front end inclined, and serving both as a support and guide for the coupling-hooks K K, substantially as described, and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDMOND O. RICHARD.

Witnesses:

GEORGE E. UPHAM,

H. C. HOLLINGSHEAD.