

(No Model.)

J. H. WARD.  
CAR COUPLING.

No. 273,326.

Patented Mar. 6, 1883.

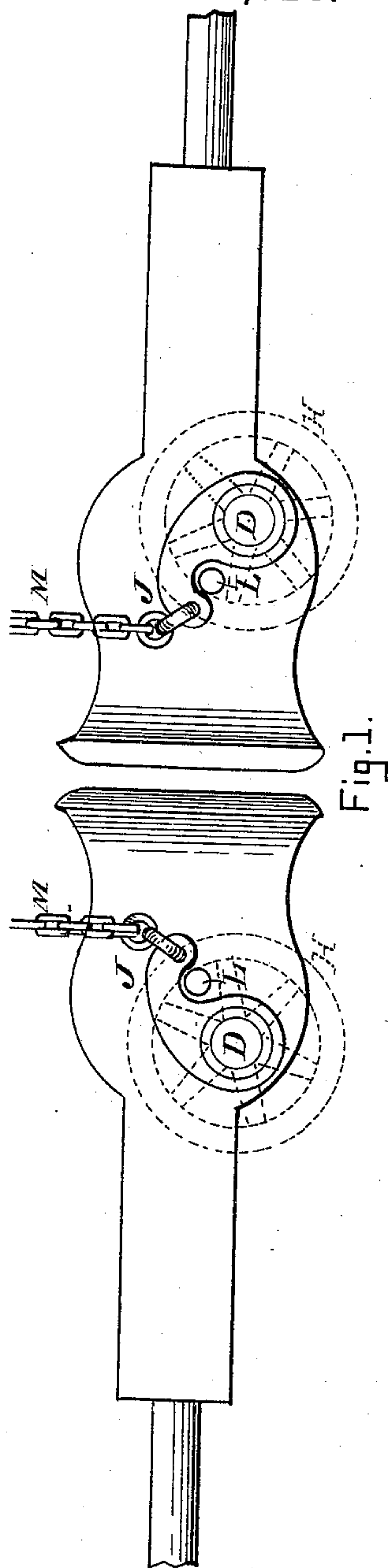


Fig. 1.

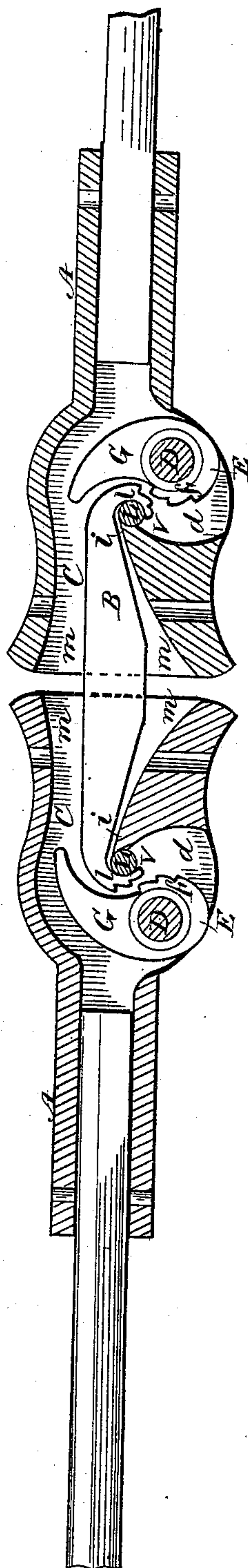


Fig. 2.

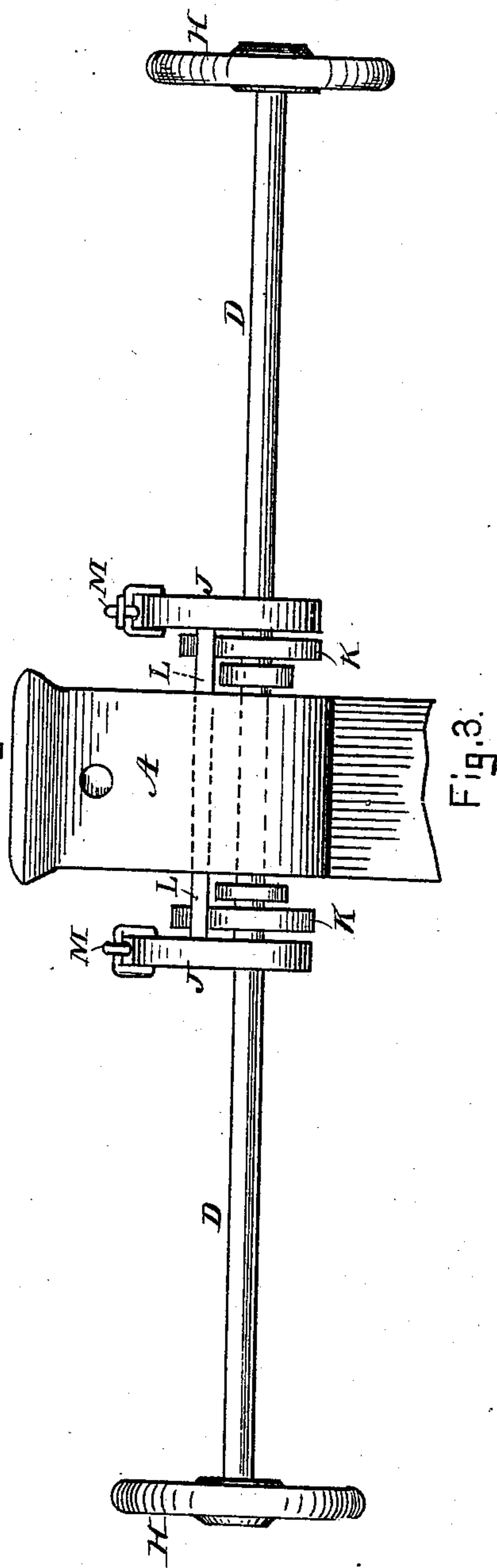


Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 273,326, dated March 6, 1883.

Application filed January 4, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. WARD, of Lowell, in the county of Middlesex, State of Massachusetts, have invented a certain new and  
5 useful Improvement in Car-Couplers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, refer-  
10 ence being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a vertical longitudinal section, and Fig. 3 a top plan view.

15 Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to that class of car-couplers which are automatic or self-coupling in their operation; and it con-  
20 sists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a cheaper, simpler, and more effective device of this character is produced than is now in ordinary use.

25 The nature and operation of the improvement will be readily understood by all conversant with such matters from the following description, its extreme simplicity rendering an elaborate explanation unnecessary.

30 In the drawings, A A represent the draw-bars, and B the link. The draw-bar heads are each provided with a longitudinal chamber, C, having a flaring mouth, *m*. The rear portion, *d*, of each of the chambers opens through the  
35 under side of the draw-bar head, and journaled therein on the shafts D are two cam-shaped levers, E, each provided with an outwardly-curved upwardly-projecting arm, G, and at their lower ends with the toothed segment *f*.  
40 The shafts extend horizontally through the draw-bar heads, and are provided at their outer ends with the hand-wheels H, being firmly attached to the levers E in the chamber C.

45 Disposed on each of the shafts D, on either side of the draw-bar head, there is a fixed curved lever, J, and coiled spring K, one end of the spring being secured to the shaft and the other to a laterally-projecting pin, L, which  
50 pin is also elongated and acts as a stop for the levers, as shown in Fig. 1.

The link B consists of a stout bar having a downwardly-curved hook, *l*, at either end, as seen in Fig. 2. These hooks are each provided with exterior teeth or serrations, *v*, and when the cars are coupled hook respectively over the  
55 pins L, which pass transversely through the draw-bar heads, as shown by the dotted lines in Fig. 3.

In the use of my improvement, one of the draw-bar heads being first provided with a link, B, if the cars are brought together, the free or outer end of the link will enter the cham-  
60 ber C in the opposite or companion head, strike the curved or outer face of the arm G, forcing it back, and, passing downwardly, hook over  
65 the pin L in the throat of the draw-bar head, thereby coupling the cars in a manner which will be readily obvious without a more explicit description. The springs K are so arranged  
70 as to force the arms G of the levers E against the hooks *l* of the link B, thereby keeping the hooks engaged with the pins L after the cars are coupled, or preventing the cars from being  
75 accidentally uncoupled, the arms being curved and extending over the hooks, as seen in Fig. 2.

Attached to the outer end of each of the levers J there is a chain, M, extending to the platform or top of the car, and by pulling these chains the arms G will be forced away from  
80 the hooks *l*, and at the same time the teeth *f* on the levers E will be caused to engage the teeth *v* on the hooks *l*, thereby disengaging the hooks from the pins L, raising the link B, and uncoupling the cars. The cars may also be  
85 uncoupled in substantially the same manner by turning the wheels H, if preferred or more convenient.

It will be obvious that the pins L perform a triple service, acting as stops for the levers J, studs for attaching the springs K, and staples  
90 for the hooks *l*, and when worn by the action of the hooks may be readily removed and new pins inserted.

The throat of the draw-bar head is so formed at *i* as to re-enforce or strengthen the pin,  
95 which in turn prevents the wear of the throat by the action of the hooks.

Having thus explained my invention, what I claim is—

1. The improved car-coupler described, the 100



same consisting of the link B, provided with the serrated hooks *l*, the draw-bar heads A, provided with the chambers C *d* and pins L, the levers E, provided with arms G and teeth *f*, and the shafts D, provided with the levers J, springs K, and wheels H, constructed, combined, and arranged to operate substantially as set forth.

2. In a car-coupler substantially such as described, the pin L, arranged to serve as a staple for the hook *l*, a stop for the lever J, and a stud for the spring K, substantially as specified.

3. In a car-coupler, substantially such as described, the link B, provided with the hooks *l*, in combination with the curved yielding lever G, adapted to receive the end-thrust of the link, turn its free end down into engagement

with the pin L, and hold it in contact therewith, substantially as described.

4. In a car-coupler substantially such as described, the levers J, provided with the chains M, mounted on the shaft D, provided with the springs K, substantially as set forth.

5. In a car-coupler substantially such as described, a link having two downwardly projecting hooks for engaging the draw-bar heads, and provided with serrations or means whereby they may be lifted out of engagement therewith, substantially as specified.

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Witnesses:

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