

(No Model.)

J. DEPEW.
CAR COUPLING.

No. 535,361.

Patented Mar. 12, 1895.

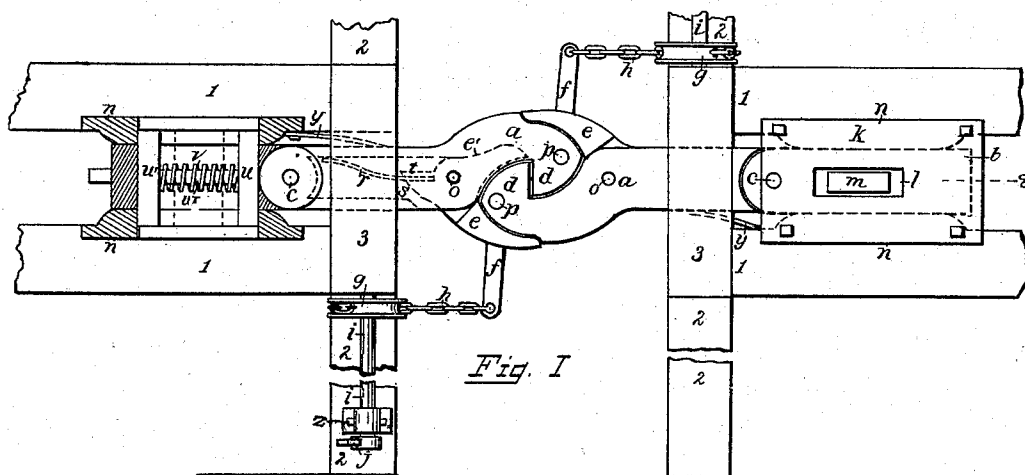


Fig. I

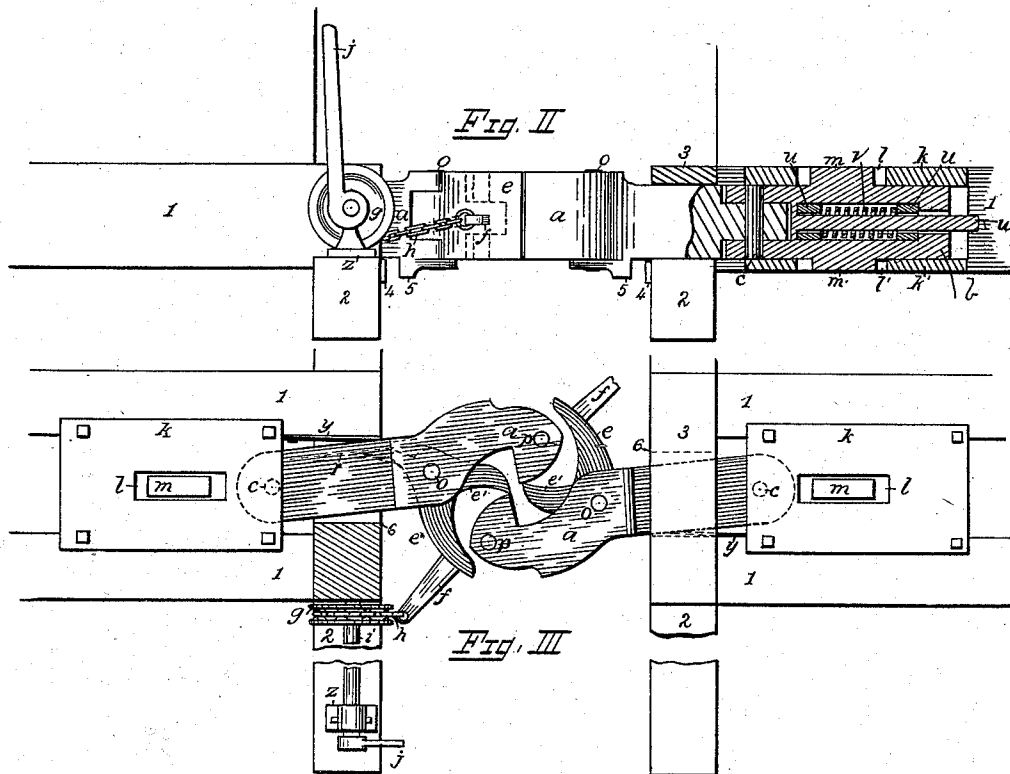


Fig. III

ATTEST.
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 535,361, dated March 12, 1895.

Application filed April 18, 1894. Serial No. 508,062. (No model.)

To all whom it may concern:

Be it known that I, JAMES DEPEW, a citizen of the United States, residing at Peekskill, in the county of Westchester and State of New York, have invented new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention relates to automatic coupling devices; and has for its object a coupling that will be reliable in use, and safe in its manipulation, as set forth in the accompanying drawings and the following description.

Figure I of the drawings is a top view of my coupling, partly in cross-section. Fig. II is an elevation of the same, also partly shown in cross section through line 8 Fig. I. Fig. III is a top view of my coupling showing its operation.

The numerals 1, 2, refer to timbers forming part of the framing of a car.

The coupling consists of a draw-head *a* pivoted at *c* to a block *b* which lies between the hook-plates *n, n*. As the thrust of pulling comes upon these plates they are let in the timbers 1, 1, as shown in the left hand coupling in Fig. I. The hook plates are slotted longitudinally to admit the ends of the cross bars *u', u*. The block *b* is also slotted as in Figs. I and II, and through this block the bars *u', u*, are inserted. As shown in Fig. I they are long enough for their ends to project into the slots in the plates *n, n*, as described. A rod *w* passes through them, and a spring *v* supported on said rod, keeps the bars apart, normally as shown in Fig. I. The block *b* is also provided with projections *m* on both top and bottom, as in Figs. I and II. Plates *k* and *k'* secured to the tops and bottoms of the hook plates are provided with slots *l, l*, through which the projections *m* pass. As thus inclosed between the hook plates *n, n*, and top and bottom plates *k, k'* the block *b* can be moved back and forth to the extent of the spaces 7, 8, between the projections *m* and the ends of the slots *l*. The tendency of the spring *v* is to keep the projections *m* in the center of the slot, as in Fig. II. If the block be pulled forward, it will be seen, by reference to Fig. I, that the bar *u'* will advance with it, against the tension of the spring. If the block be pushed backward the bar *u* will

be carried in the same direction, against the spring. Thus the spring acts as a cushion to relieve the concussion of a sudden pull either way on the coupling.

The draw-head *a* consists of two parts, *a*, and the fork *e, e'*. Within the main piece *a* a chamber *s* is cored out to receive this fork, which swings on the pintle *o*. Its inner end impinges against, or has attached to it, a stiff spring *r*, which tends to keep the fork closed to its place, as in Fig. I.

The draw-head terminates in a hook shaped head *d*, its outer contour taking a form to fit the inner face of the outer prong *e* of the hook *e, e'*, the inner curve of the head corresponding with its outer curve, making a shape exactly conforming to the space inclosed by the head *d* and the hook *e, e'*, so that when a pair of the draw-heads are united as in Fig. I they form a harmonious oval in their plan. When a pair of these draw-heads normally closed, that is with the hooks *e—e'* in a closed position, approach each other the points of the heads *d* will enter the spaces between the said heads and the ends of the prongs *e*, forcing them apart and allowing the heads to couple automatically, without any attention whatever. The arm *f* is attached to the prong *e*. From the arm chain *h* extends to a wheel *g*, which is supported on a shaft *i*, having an outer bearing *z*. Turning the wheel by means of the lever *j* the chain is wound on the wheel, causing the coupling to open, as in Fig. III. Of course the shaft may be made operative from the top of the car, by any of the means commonly in use.

Fig. III illustrates the process of uncoupling. By throwing the lever *j* downward the hook *e, e'*, is caused to swing open to the position shown. In moving, the inner prong, *e'*, bears against the opposite head *d*, forcing it from contact with its own coupling, pushing the two heads apart, and opening the hook of the opposite coupling. Normally the draw-heads are kept against stops 6 by means of the springs *y*. In the act of opening the couplings the resistance of the springs *r* in the draw-heads reacts upon the springs *y*, permitting the draw-heads to swing on their pivots *c*, far enough to admit of the separation of the hooking heads *d*, as shown.

Flanges 5 on the under side of the draw-heads, and metal plates 4 on the timbers may be made to serve as bumpers.

The heads *d* are slotted horizontally at their middle as shown by broken lines 7 Fig. II. By means of this slot, and holes *p* for coupling pins, this coupling may be united to the common link coupling.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination in a car coupling of the draw-head *a* provided with the head *d*, hook

e, e', spring *r* within the chamber in said draw-head and acting upon said hook, pivot *c*, slotted block *b* having extensions *m, m*, and carrying bars *u, u'*, spring *v* and rod *w*, hook plates *n, n*, plates *k, k'*, slotted to receive the projections *m, m*, timbers 1, 2, 3, shoulders 6 and spring *y*, arm *f* and chain operating mechanism, substantially as herein shown and described.

JAMES DEPEW.

Witnesses:

STANLEY LITTEL,

GEORGE A. STORMS.