

(No Model.)

2 Sheets—Sheet 1.

W. H. & J. T. STARKEY.

CAR COUPLING.

No. 491,450.

Patented Feb. 7, 1893.

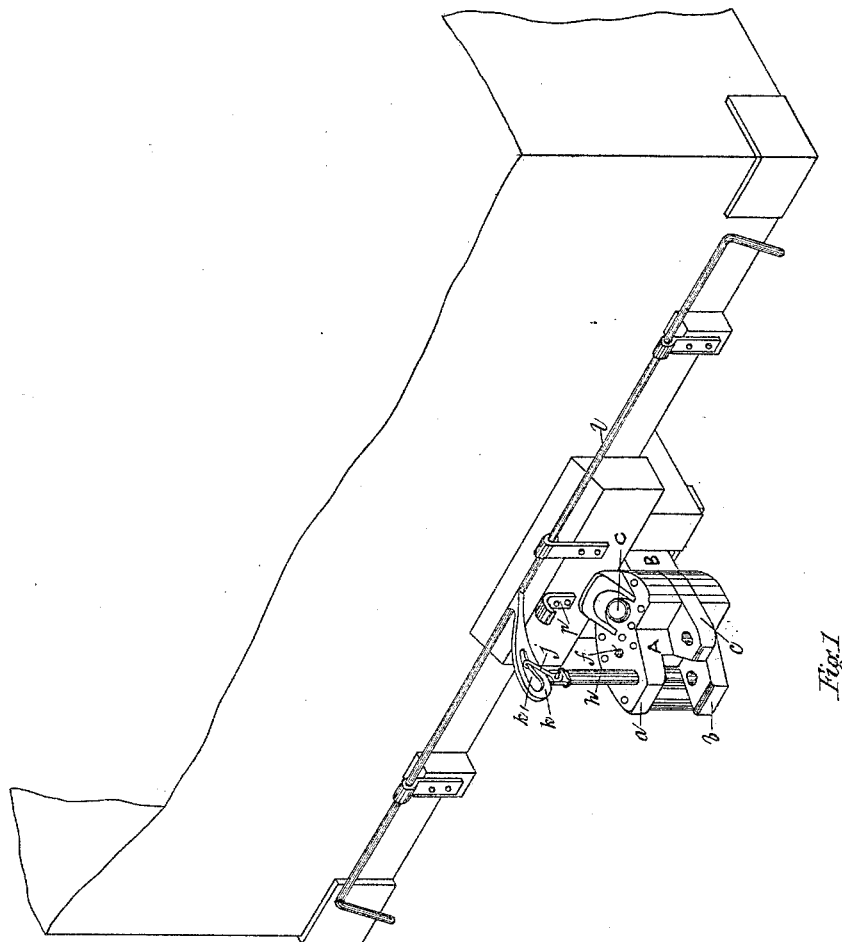


Fig. 1

WITNESSES:

Frank M. Cully  
Frederick Keith

William Henry Starkey  
James Thomas Starkey INVENTORS

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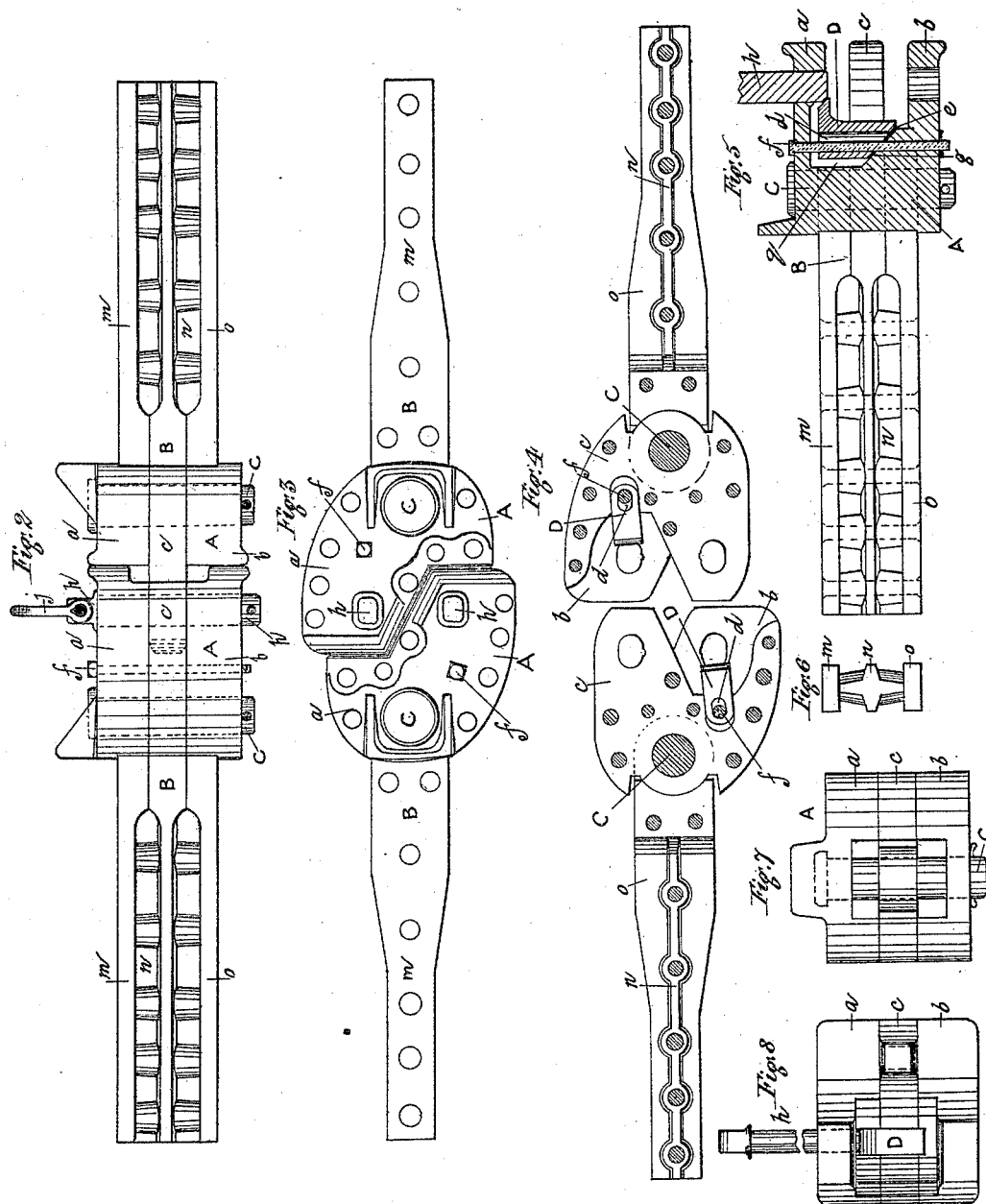
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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY STARKEY AND JAMES THOMAS STARKEY, OF MONCTON,  
CANADA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 491,450, dated February 7, 1893.

Application filed April 12, 1892. Serial No. 428,777. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM HENRY STARKEY and JAMES THOMAS STARKEY, mechanics, of the city of Moncton, in the county of Westmoreland, in the Province of New Brunswick, in the Dominion of Canada, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

Our invention relates to improvements in machines for the coupling and uncoupling of railway cars in a new and improved manner which can be applied to all cars of whatever nature and we hereby declare that the following is a full clear and exact description of the same reference being had to the accompanying drawings in which

Figure 1—is a general view of the machine embodying our invention attached to car. Fig. 2—is a side elevation of the same with draw heads coupled together showing the three longitudinal sections of the same. Fig. 3—is a top view of the machine showing drawheads coupled together. Fig. 4—is a view of the machine showing drawheads with top sections removed exhibiting top of pin tripper (D). Fig. 5 is a side view of shank and a longitudinal vertical section of drawhead through pin tripper D. Fig. 6—is a view of rear end of shank. Fig. 7—is a rear view of draw head showing pivot pin C. Fig. 8—is a front view of drawhead showing coupling pin (h) held in position by pin tripper D.

Similar letters refer to similar parts throughout the several views.

The objects of our invention are the coupling automatically and uncoupling of railway cars in a new and improved manner which we attain by the mechanism illustrated in the accompanying drawings which has a new and improved drawhead A (Fig. 1) of peculiar shape shown made of three longitudinal horizontal sections of suitable metal *a*, *c*, *b*, respectively representing the upper center and bottom sections and riveted together as shown in Figs. 1, 3 and 4. The drawhead is connected with the shank B by an ordinary hinge joint pivoted by a steel pin C to the shank B so as to allow for motion of cars in passing over curves. In sections *a*, *b* and *c*, are circular openings for reception of pin *h*, which pin *h*,

(Fig. 1) is held in position by pin tripper D which has a vertical slotted hole *d* through which a steel pin *f*, is placed to guide the pin tripper. The pin tripper also has an oblique base *e* which moves on an inclined plane (*g*) in a cavity in the drawhead being guided by the pin in the slotted opening up and down the inclined plane of the cavity in the drawhead so that when the position of the drawhead strikes the pin tripper it is forced up the inclined plane (*g*) guided by pin (*f*) and thus allows the coupling pin, W, which it held in position (Fig. 1) to fall, pass through the circular openings for its reception and thus securely and effectively and automatically couple the cars. There is a lever rest attached to end of car (*p*) which supports the lever (*k*) when coupled.

The coupling is effected by means of the steel pin (*h*) (Fig. 1) dropping as before described and passing through circular openings in each drawhead which fit into each other, one forming the counterpart of the other, a male and female part as shown in Figs. 3 and 4.

The uncoupling is effected by raising the pin (*h*) by means of an ordinary shackle (*j*) attached to the pin C in an ordinary manner and moving in a slot (*k'*) in a new and improved lever (*k*) peculiarly shaped as shown in diagram and attached to an ordinary shaft or rod (*L*) on rear of car as shown in Fig. 1 of accompanying drawings.

The lever (*K*) is of the peculiar shape indicated in drawings having in the outer extremity an elongated oval opening (*K'*) with the greatest curvature toward the extremity and having a particular convex lower part and a concave upper part, the whole made of suitable metal. The shank B is made of suitable metal in three longitudinal horizontal sections *m*, *n* and *o* respectively the upper center and bottom, the center section having peculiar raised portions on its two outer and exposed sides which do not extend to the outer edge of the sections *m* and *o* as seen in Fig. 4. We prefer the center section *n* to be made of cast iron with holes for rivets through the enlarged portions thereof which thus affords greater strength and less bulk than if one continuous part equal in dimensions with the top and

bottom sections were made. The upper and bottom sections *m* and *n* we prefer to have made of steel. The shank is made of three sections for the purpose of being readily repaired affording strength and forming a hinge joint in head (Figs. 4 and 7) by elongation of the two sections *m* and *o* which have circular openings for pivot pin *C* the center section *n* forming at its extremity in head a butt for hinge as in Fig. 4. In the drawhead we prefer to have the center section made of forged steel and the top and bottom sections made of steel castings but the several parts of the whole mechanism may be made of any suitable metal.

What we claim as our invention and desire to secure by Letters Patent is,

1. The combination in car-couplers of a drawhead *A* made in three parts *a*, *b* and *c*, and having its shank *B*, made in horizontal sections *m*, *n*, *o*, a pin tripper *D* with oblique base *e*, having a slotted opening *d*, a steel pin *f*, a coupling pin *h*, shackle *j*, attached to coupling pin *h*, lever *k* having slotted opening *k'*, and pivot pin *C*, substantially as hereinbefore described and shown and for the purposes therein set forth.

2. The combination of a pin tripper *D* which has an oblique base and a vertical slotted hole (*d*) through which a steel pin (*f*) is placed to guide it, with a drawhead having a cavity with an inclined plane, *g*, upon which the oblique base of the pin tripper, *e*, moves up and

down when pushed in by center section of the drawhead when cars are shunted together the pin tripper holding the coupling pin in position ready to drop when cars are shunted together substantially as hereinbefore described and for the purposes therein set forth.

3. The pin tripper *D* having an oblique base also slotted opening *d*, and a steel pin *f*, passing through it as shown and described and for the purposes set forth.

4. The lever "*k*" of the peculiar shape shown in the drawings and having in its extremity a slotted opening *k'* of the peculiar shape shown in which a shackle works for the purpose of lifting the coupling pins in position substantially as and for the purposes hereinbefore set forth and described.

5. A shank *B* made of suitable metal in three longitudinal horizontal sections *m*, *n*, *o* respectively the upper center and bottom sections, as shown in drawings, substantially as hereinbefore described and for the purposes therein set forth.

Dated at the city of Moncton, in the said county of Westmoreland, in said Province of New Brunswick, this 8th day of April, A. D. 1892.

WILLIAM HENRY STARKEY.  
JAMES THOMAS STARKEY.

In presence of—

FRANK ARTHUR MCCULLY,  
JAMES S. BENEDICT,  
FREDERICK KEITH.