(No Model.)

# F. N. KELSEY.

## CAR COUPLING.

No. 344,382. Patented June 29, 1886.

Fig. 1.

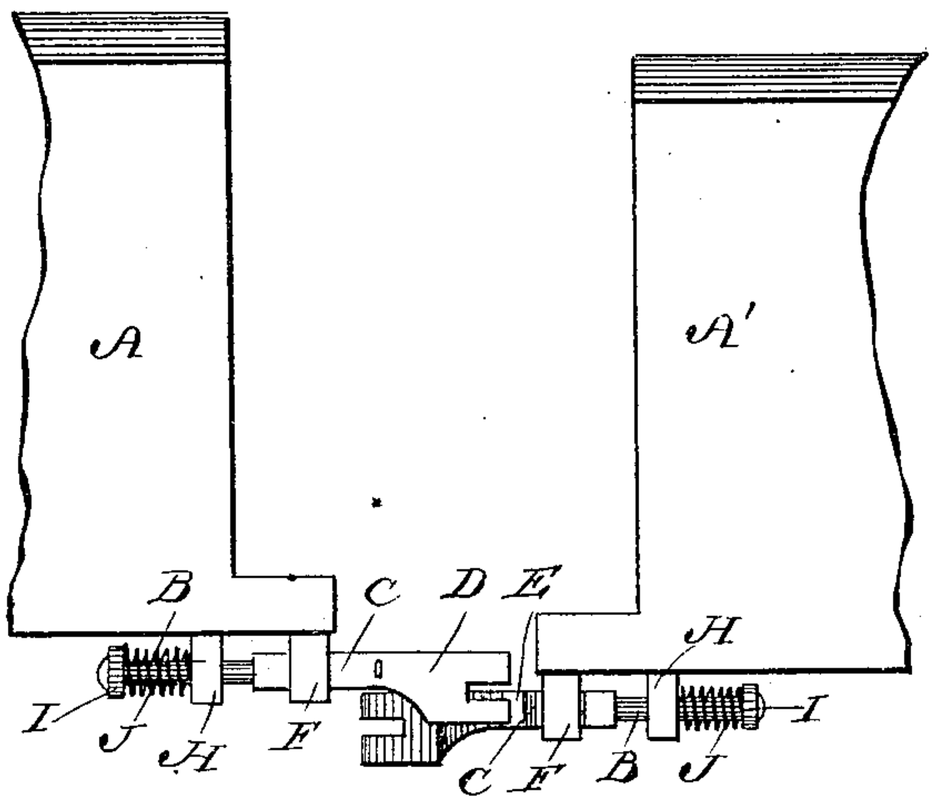



Fig. 2.

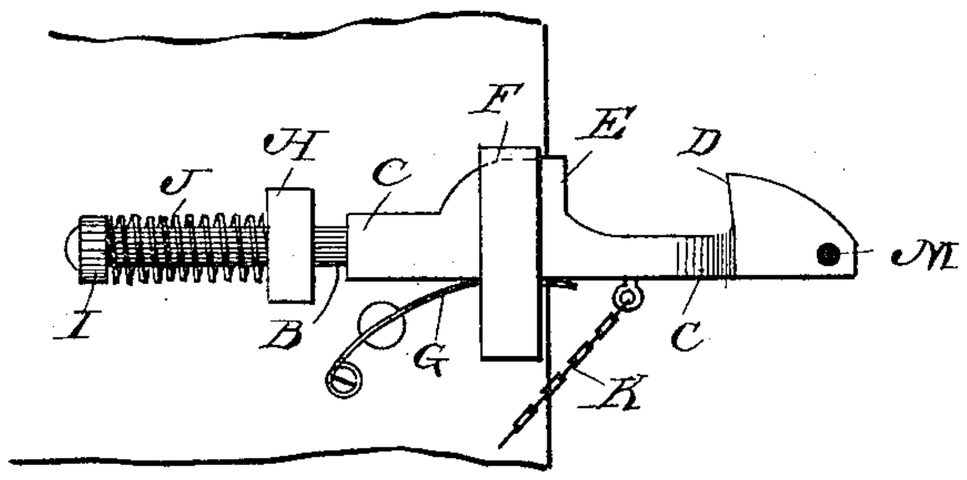
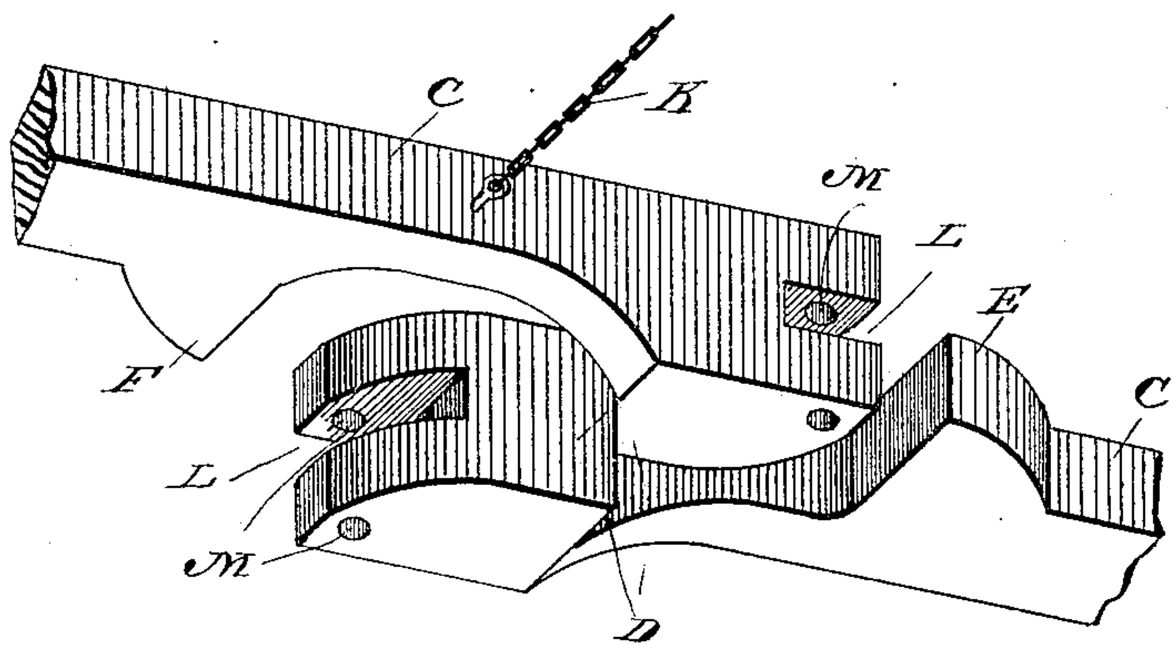



Fig. 3.




Witnesses
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# UNITED STATES PATENT OFFICE.

FRANK N. KELSEY, OF NEW HAVEN, CONNECTICUT.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 344,382, dated June 29, 1886.

Application filed January 9, 1885. Serial No. 152,424. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK N. KELSEY, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain novel and useful improvements in car-couplers, and has for its object to provide an automatic device of this description which shall obviate the difficulty attendant upon couplers now in use, especially on freight-cars—viz., the danger to the person coupling, inconveniences arising from the different heights of cars, the strains on the draw-bars in turning abrupt curves, and the liability of coming uncoupled; and with these ends in view my invention consists in certain details of construction and combination of elements, hereinafter fully explained, and then specifically designated by the claim.

In order that those skilled in the art to which my invention appertains may fully understand its construction and operation, I will proceed to describe the same in detail, referring by letters to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of the ends of two cars provided with my improvement; Fig. 2, a plan view of one coupler; Fig. 3, a perspective showing the relative position of two couplers when in engagement, one being in a higher plane than the other.

Similar letters denote like parts in the several figures of the drawings.

A A′ are ends of two cars of ordinary construction.

B is a draw-rod, formed with or secured to the draw-head C. This draw-head at its outer extremity is formed with a hook, D, which is extended downwardly to nearly or quite double the thickness of the remainder of said draw-head.

E is an abutment, which projects out from the draw-head at right angles thereto. The draw-head, between the abutment E and the hook D, is concaved to correspond with the convex of the hook.

F is a housing secured to the bottom of the car, through which passes the draw-head.

G is a spring secured to the bottom of the car, as shown in Fig. 2, and bearing against the back of the draw-head. The tendency of this spring is to keep the draw-head in its normal position against the other side of the housing.

H is the draw-block, through which passes the draw-rod in the ordinary manner, and said draw-rod has a cap, I, on its inner end, between which and the draw-block is confined the coil-spring J.

K is a chain secured to the draw-head, by which said head may be moved backward against the resiliency of the spring G. This chain may pass around any convenient drum, connected by rod to a hand-wheel on the top or side of the car, or at both points, so that the coupler may be manipulated without danger to the operator.

L is a slot formed in the outer extremity of the hook, and M holes through which a pin may be passed when it becomes necessary to couple an ordinary link to my improved draw-head.

From the foregoing description the operation of my improvement will be obviously as follows: When it is desired to couple one car to another, it is only necessary to run them together, when the rounded faces of the hooked ends of the draw-heads will strike and force each other backward against the resiliency of the springs G until the hooks pass and said springs throw them into engagement, where they will remain till withdrawn by power applied to the chain K. The extension of the hook D admits of the successful coupling of cars of various heights, as clearly shown in Figs. 1 and 2. When cars of maximum and minimum heights are coupled, the draw-head of the latter coming below the buffer-plates of the former will strike against the abutment E, which will receive and sustain the shock caused by the momentum of the cars being coupled, or the holding back of a train on a grade. The concaving of the draw-head between the abutments and the hooks allow the rounded faces of the hooks to rock against the draw-head in turning abrupt curves in the road without disengaging the hooks or straining the draw heads or rods.

I am aware that heretofore a draw-head has been devised having the hook, abutment, and

concave portion shown in my device, and hence I do not claim such devices, broadly.

My invention is claimed as the combination, with the draw-head of the form described, of the peculiar devices and connections for securing the draw-rod to the car-frame and preventing uncoupling and strains in turning curves.

It will be noticed that the upper and outer surfaces of my draw-head are plane, thereby rendering its construction more simple and inexpensive.

Having thus described my invention, what I claim as new and useful is—

The combination, with the car-body carrying the housing F, draw-block H, and spring G, of the draw-rod B, having the extended hooked head D, with its slot L, and holes M, abutment E, and the concaved portion between said head and abutment, the operating-chain K, and the spring J, the outer face of the head being curved to correspond to the curvature of the said concaved portion, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK N. KELSEY.

Witnesses:

JAMES B. RATHBONE,

S. S. WILLIAMSON.