

A. A. KELLOGG.
Car-Coupling.

No. 159,099.

Patented Jan. 26, 1875.

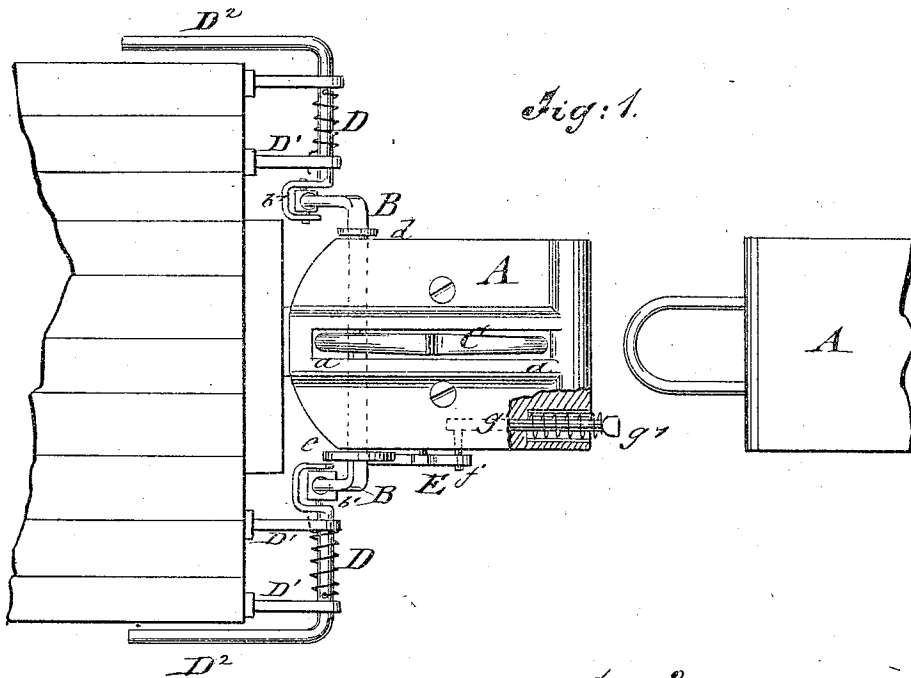


Fig: 1.

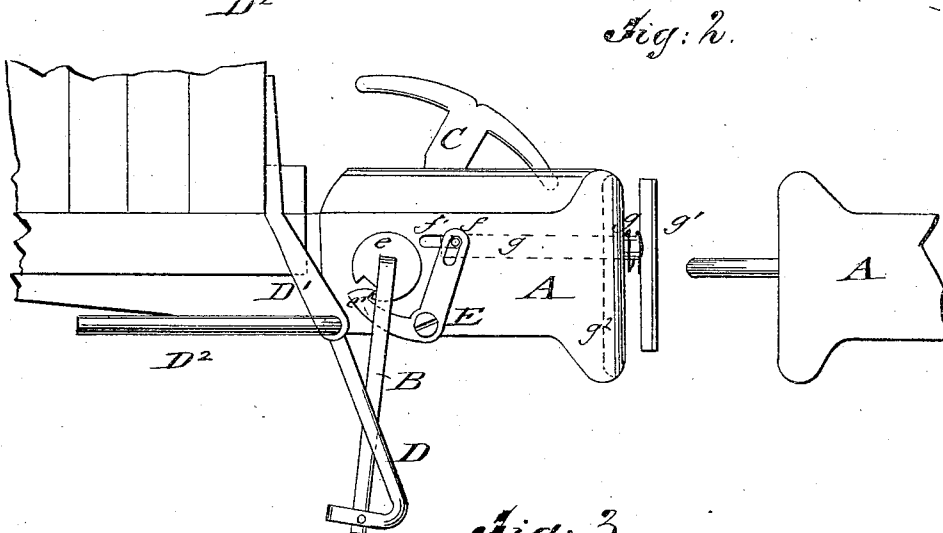


Fig: 2.

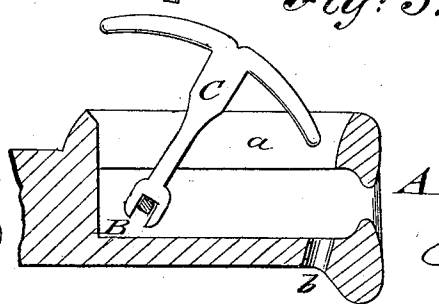


Fig: 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ALBERT A. KELLOGG, OF MONTGOMERY, MICHIGAN, ASSIGNOR TO HIMSELF
AND MILES E. CARTWRIGHT, OF SAME PLACE.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **159,099**, dated January 26, 1875; application filed
December 28, 1874.

To all whom it may concern:

Be it known that I, ALBERT A. KELLOGG, of Montgomery, in the county of Hillsdale and State of Michigan, have invented a new and Improved Car-Coupling, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, Fig. 2 a side view, and Fig. 3 a vertical longitudinal section, of my improved car-coupling.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an automatic car-coupling that may be readily and conveniently set from the outside of the car, and coupled by the concussion of the draw-heads.

My invention consists of a draw-head with longitudinal top slot and swinging coupling-hook, that is seated, when carried into downward position, into a bottom hole of the draw-head, locking thereby the coupling-link. The coupling-hook is attached to a lateral shaft, and swung, by a spring-acted lever-frame provided with handles at the sides of the car, into raised position, being retained therein by the action of a bell-crank lever or dog, with hook end, pivoted at the outside of the draw-head, on a notched disk of the hook-shaft. A spring-rod with broad front head slides in a guide-recess of the draw-head, and connects with the other end of the dog, so that by the concussion of the draw-heads the shaft of the coupling-hook is released, and the hook carried down by the spring-power of the lever-frame for coupling the link.

In the drawing, A represents a draw-head, which is attached, in the usual manner, to the car-frame, and provided with a central longitudinal top slot, *a*, extending to nearly the front part of the same. The mouth of the draw-head is tapering to a narrow slot, which opens into a wider interior cavity, for the purpose of giving play to the link when coupling cars with different heights of platform. A lateral shaft, B, turns in a rear perforation of the draw-head, and passes through the interior cavity of the same, being of square cross-section at the part within the cavity, for placing thereon securely the recessed end of the

coupling-hook C, which swings in the slot of the draw-head, and locks, when in downward position, into a bottom perforation, *b*, of the draw-head. The coupling-hook C is preferably made of double shape, with arc-shaped hook parts extending from both sides of the main or stem parts, for the purpose of admitting the use of the other half in case of breakage or injury to the one in use, by merely changing its position on the shaft. The outer ends of shaft B are bent under right angles, and slide freely in pivoted guide-nuts *b'* of the similarly-bent ends of a lateral spring-acted lever-frame, D, that turns in supporting-arms D¹, attached to the car, and is provided with lever-handles D² at the outside of the car, so that the lever-frame, and thereby the coupling-hook, may be readily raised and set in position for coupling from the side of the car without stepping in between the cars. The sliding shaft ends B take up the concussion of the draw-head or coupling without injury to the lever-frame. The position of the hook-shaft B is securely retained in the rear part of the draw-head by a nut, *d*, at one side, and a notched disk, *e*, at the other side, the disk sliding along and acting upon the hook-shaped end *e'* of a bell-crank lever or dog, E, which is pivoted at the outer side of the draw-head, and attached, by its other slotted arm, to a pin, *f*, of a spring-acted rod, *g*, that slides in a longitudinal guide-recess of the draw-head. The connecting-pin *f* projects through a slot, *f'*, of the draw-head, sliding backward and forward with rod *g*, which is provided with a broad head-piece, *g'*, at the front of the draw-head, sidewise of the mouth. The hook end of dog E locks into the notched disk *e* when the lever-frame D is swung down, and the coupling-hook raised thereby, retaining the hook in position above the draw-head, ready for the entrance of the coupling-link. The front head of spring-acted rod *g* projects beyond the face of the draw-head until, by the entering of the link and the concussion of the draw-heads, the front piece, *g'*, is carried back into a corresponding recess, *g''*, of the draw-head, releasing thereby the dog from the disk, and causing, by the instant swinging down of the coupling-hook by the spring action of the le-

ver-frame D, the secure coupling of the cars. A raised lateral flange at the bottom of the mouth of the draw-head serves to raise or lower readily the link to any inclination by the raising or lowering the lever-hook, so that the link may be set to enter easily the approaching draw-head at whatever height the same is arranged.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In automatic car-couplings, the combination of draw-head A, having longitudinal top slot, *a*, and bottom perforation, *b*, with swinging and spring-acted coupling-hook B, for locking securely to draw-head and retaining the coupling-link, substantially as set forth.

2. The lateral hook-shaft B, pivoted to rear part of draw-head A, and having rectangular cross-section at the part of the cavity of the draw-head, in combination with recessed end of shank of coupling-hook, for attaching the same securely but detachably thereto, for the purpose specified:

3. The pivoted lever-frame B, having extension-arms, in connection with pivoted nuts *b'* of a spring-acted lever-frame, D, for yielding to tire concussion of the draw-head without breaking lever-frame, as set forth.

4. The combination of spring-acted lever-frame D and pivoted lateral shaft B, having notched disk *e*, with pivoted dog E, having end hook, *e'*, for locking shaft B and coupling-hook in raised position, or swinging down lever-frame, substantially as specified.

5. The combination of lever-frame D and shaft B, having notched disk *e*, with pivoted elbow-dog E and sliding spring-acted rod *g*, having projecting front piece, *g'*, for releasing shaft B and lever-frame D on concussion of draw-heads, and carrying coupling-hook down for locking link to draw-head, substantially as and for the purpose set forth.

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Witnesses:

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