

(No Model.)

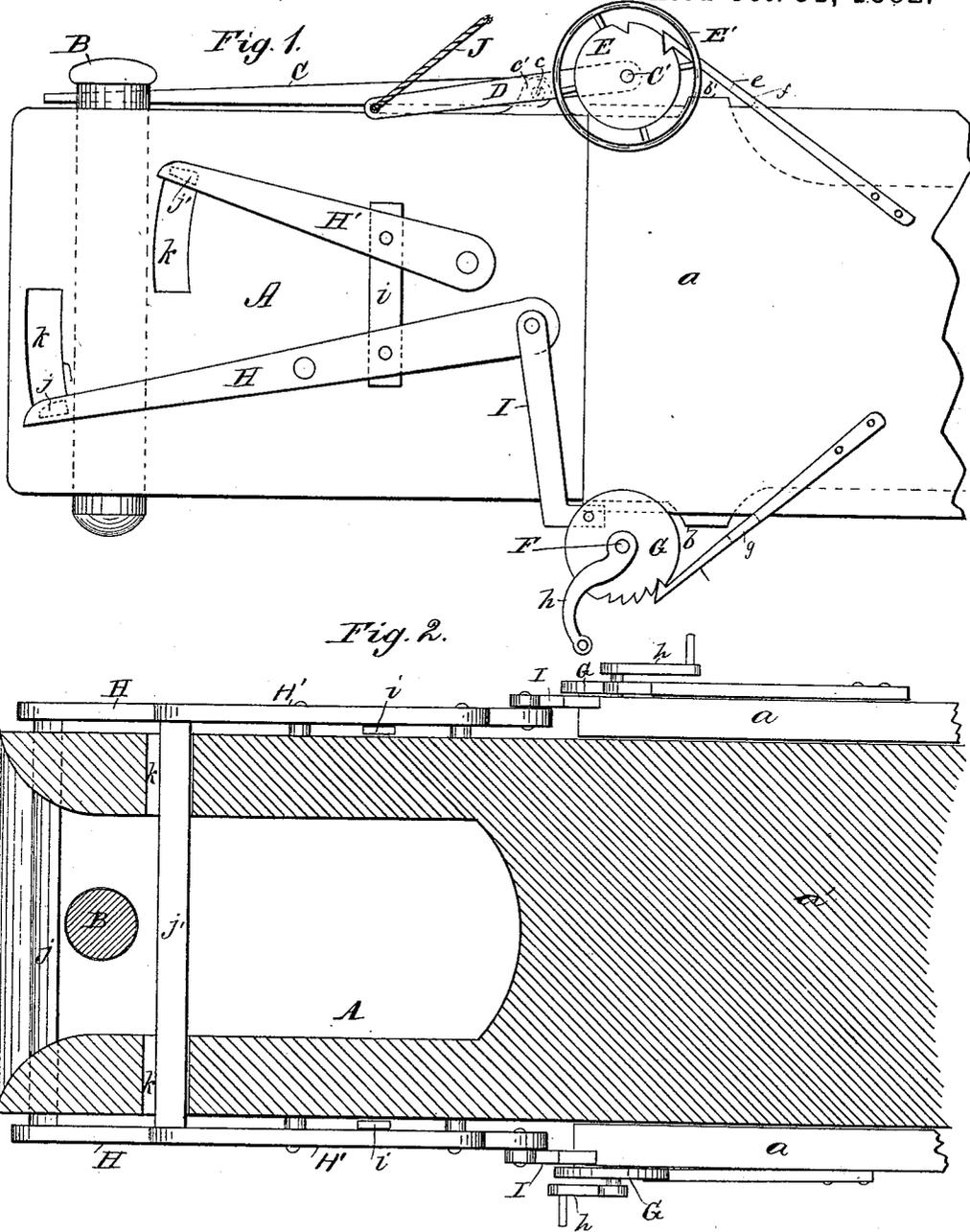
2 Sheets—Sheet 1.

D. E. KELLEY.

CAR COUPLING.

No. 266,839.

Patented Oct. 31, 1882.



WITNESSES:

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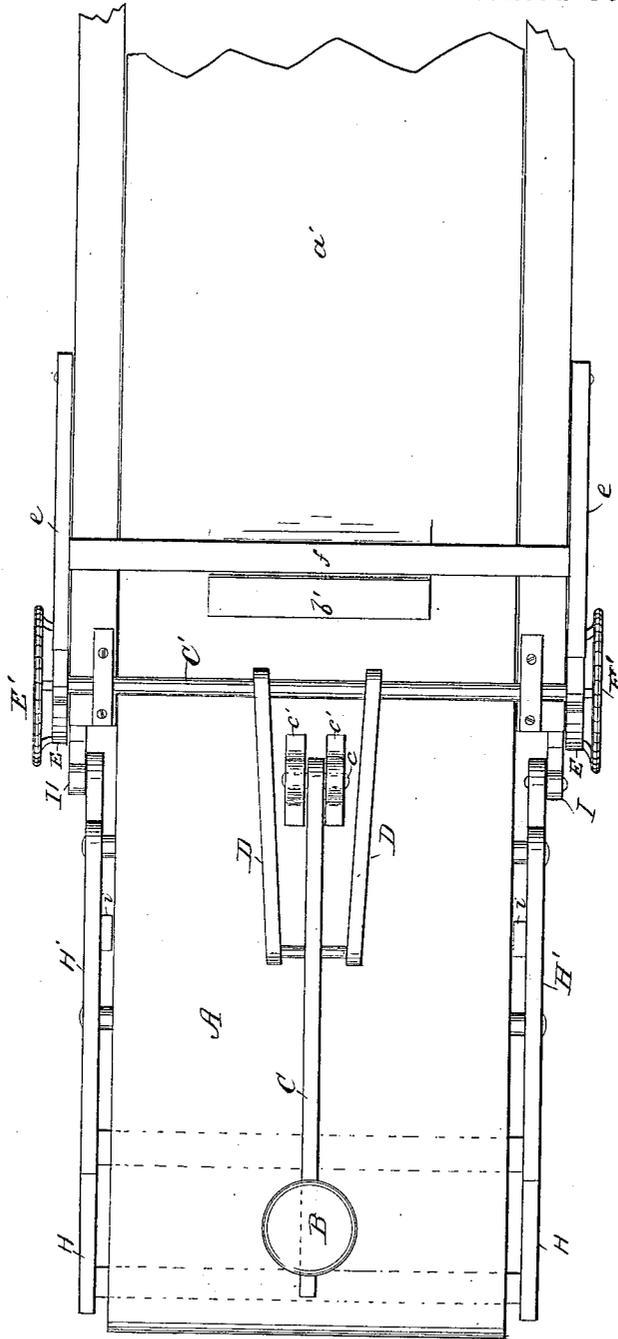


Fig. 3.

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# UNITED STATES PATENT OFFICE.

DANIEL E. KELLEY, OF GAYLORD, KANSAS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 266,839, dated October 31, 1882.

Application filed August 26, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL E. KELLEY, of Gaylord, in the county of Smith and State of Kansas, have invented a new and useful Improvement in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in car-couplings, and has for its object to enable the ready and easy coupling and uncoupling of the cars without danger to the operator.

The nature of the invention consists in the employment of mechanism for operating or elevating the coupling-pin, and for guiding the link into the approaching draw-head, substantially as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a side view of my improved car-coupling. Fig. 2 is a horizontal section thereof, taken on a plane above the upper link guide-bar. Fig. 3 is a plan view of the same.

In carrying out my invention I employ a draw-head, A, of the usual construction, and supported to have a limited longitudinal movement between timbers or bars *a*, fastened to the under side of the car, the rear portion, *a'*, of said draw-head also extending back under the car. The draw-head extension *a'* has shoulders *b b'*, one arranged at its upper side and the other at its lower side, the function of which will be explained hereinafter.

B is the coupling-pin, of the ordinary form, and adapted to fit into a vertical aperture of the draw-head A.

C is a lever fulcrumed at its rear end, at *c*, between lugs *c'* of the draw-head, and having its forward end adapted to connect with the upper end of the coupling-pin.

D is a bail-shaped lever, with its forward end arranged crosswise of and underneath the lever C, and having the rear ends of its side bars secured to an axis or fulcrum, C', supported in lugs or supports on a cross-piece of the side bars or timbers, *a*. Upon this same axis or shaft are secured notched wheels or ratchets E, with which engage spring-pawls *e*, pivoted to the side bars or timbers, *a*. At the ends of the same shaft are hand-wheels E', arranged upon the outside of the side bars or timbers, *a*, to enable the operation of uncoupling

the cars to be performed with safety to the operator. These pawls are connected together by a cross-bar, *f*, which is arranged contiguously to the shoulders *b'* on the draw-head as seen in Fig. 3.

Arranged upon the under side of the draw head, near the side bars or timbers, *a*, is a shaft, F, carrying ratchets G, with which also engage spring-pawls *g*, hung on the sides of the timbers or side bars, *a*. To this shaft is also applied a handle or crank, *h*.

H H' are levers, arranged two on each side of the draw-head, the levers H being fulcrumed near their center and the levers H' at their inner ends. The two levers on each side of the draw-head are connected together by a link, *i* and to beveled cross-bars *j j'*. These bars are arranged in the draw-head, the lower one being disposed in front of the coupling-pin and in a plane below the incoming link, and the upper one disposed in rear of the coupling-pin and in a plane about the link, said bars passing through vertical slots *k* in the sides of the draw-head to permit their attachment to the levers and their vertical adjustment or movement, as presently set forth. The inner ends of the lower levers, H, are connected by L-shaped pitmen I eccentrically to the ratchets G.

It will be observed that by turning either of the hand-wheels E' in the required direction the bail-shaped lever D will be lifted, which in turn will lift the lever C and cause the elevation of the coupling-pin, which will be retained in such position by the spring-pawls *e*, and thus admit the coupling-link into the draw-head. The incoming link of the approaching car will be guided centrally into the draw-head by turning the handle or crank *h* in the required direction, which will cause the partial rotation of the ratchet-wheels G, in turn operating the levers H H', carrying the cross-bars *j j'*, and cause the latter to approach and guide the link, as above stated.

It will be further observed that after the entrance of the coupling-link, and upon the meeting of the draw-heads of the approaching cars, the movement of the draw-heads will cause the shoulders *b b'* thereof to act upon the pawls *e g*, so as to disengage them from the notched and ratchet wheels E G, when the coupling-pin will fall and effect the coupling of the cars, and the bars *j j'* will be removed from contact with

coupling-link and returned to their original position from the link.

In a car-coupling, when applied to a house-car, has a lifting-lever D connected to the top of the car by a cord, line, or chain, J, to allow the coupling operation to be effected therefrom, avoiding the necessity of the brakeman or rator descending to a lower point for that purpose.

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

In a car-coupling, the combination, with a coupling-pin, of the notched wheels, their spring-pawls and shaft having the bail-shaped lever, and the lifting-lever connected to the coupling-pin, and having the bail-shaped lever arranged underneath and crosswise of it, substantially as and for the purpose set forth.

In a car-coupling, the combination, with a coupling-pin, its lifting-lever, the bail-shaped lever, with its forward end arranged underneath and crosswise of the pin-lifting lever, and having its side-bars connected to an axle or shaft provided with notched wheels or ratchets engaged by spring-pawls, of the moving draw-head provided with shoulders arranged on their upper sides contiguously to said spring-pawls, substantially as and for the purpose set forth.

In a car-coupling, the combination, with a slotted draw-head, of the levers arranged on each side thereof, with their forward ends connected to cross-bars arranged one in a plane below the incoming link and in front of the coupling-pin and the other in a plane above the link and behind the pin, said levers connected together between their pivots,

the L-shaped pitmen, and the ratchets engaged by spring-pawls, the shaft of the latter having means for its operation, substantially as and for the purpose described.

4. In a car-coupling, the combination, with the cross-bars arranged one in a plane below the incoming link and in front of the coupling-pin and the other in a plane above the link and behind the pin, levers connected to said cross-bars and connected together between their pivotal points, the L-shaped pitmen and the ratchet-wheels having a handled shaft and engaged by spring-pawls, of the moving slotted draw-head having a shoulder on its lower side adapted to disengage said pawls from their ratchets, substantially as and for the purpose specified.

5. In a car-coupling, the combination of the coupling-pin, its lifting-lever, the bail-shaped lever with its forward cross-piece arranged underneath and crosswise of the pin-lifting lever, and having its side bars or arms connected to a shaft carrying a notched wheel engaged by a spring-pawl, and the cross-bars, arranged one in a plane below the incoming link and in front of the coupling-pin and the other in a plane above the link and behind the pin, and connected by connected-together levers and L-shaped pitmen to ratchets engaged by spring-pawls, with the slotted moving draw-head having shoulders at its upper and at its lower side adapted to operate on the aforesaid spring-pawls, substantially as and for the purpose stated.

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Witnesses:

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