

No. 633,086.

Patented Sept. 12, 1899.

I. J. HOYT.
CAR COUPLING.

(Application filed Sept. 22, 1898.)

(No Model.)

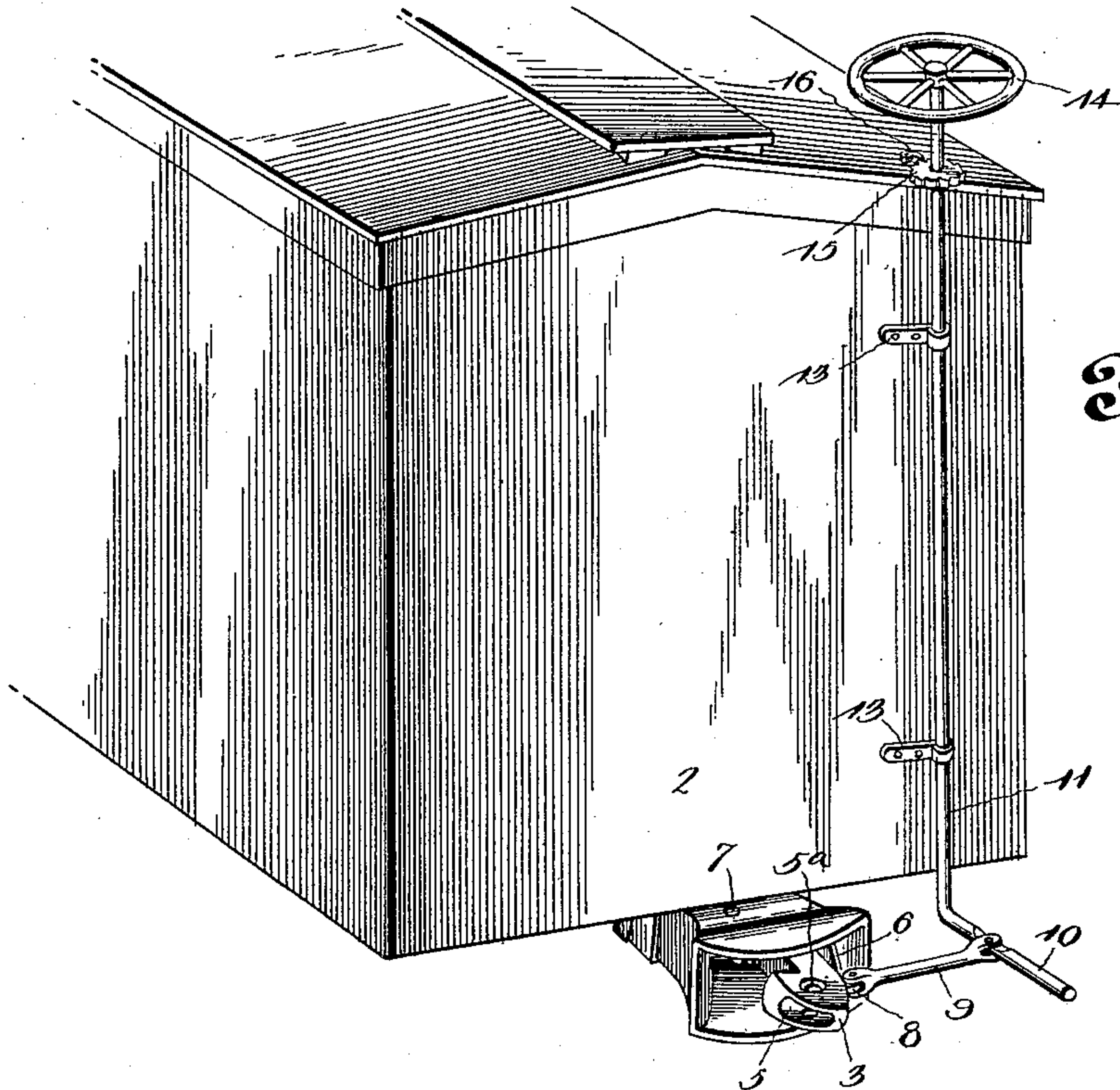


Fig. 1.

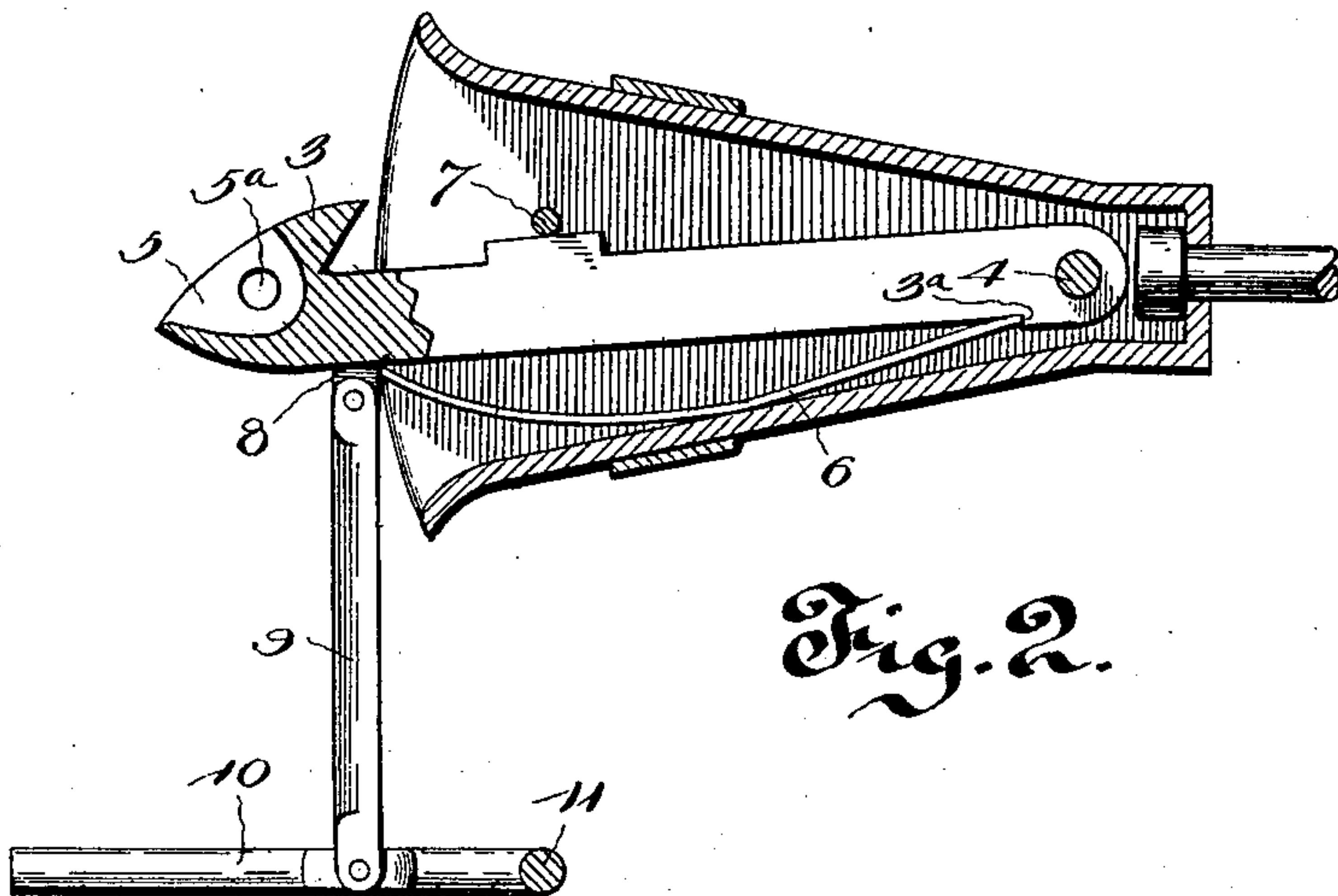


Fig. 2.

Witnesses
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J. F. Pley

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By *his* Attorneys.
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UNITED STATES PATENT OFFICE.

IVEN J. HOYT, OF WATSEKA, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 633,086, dated September 12, 1899.

Application filed September 22, 1898. Serial No. 691,617. (No model.)

To all whom it may concern:

Be it known that I, IVEN J. HOYT, a citizen of the United States, residing at Watseka, in the county of Iroquois and State of Illinois, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

The object of the present invention is to improve the construction of automatic car-couplings, more especially the means for uncoupling the same, and to provide a simple, inexpensive, and efficient device adapted to enable a car-coupling to be readily uncoupled from the tops and sides of cars without going between them.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention and shown applied to a car. Fig. 2 is a horizontal sectional view.

Like numerals of reference designate corresponding parts in both figures of the drawings.

1 designates a draw-head mounted on a car 2 in the usual manner and having a spring-actuated coupling-hook 3 pivoted within it and adapted to interlock with the hook of the corresponding draw-head, whereby two cars are coupled. The inner end of the shank of the hook is perforated to receive a vertical pivot 4 and is provided at one side with a shoulder 3^a, against which abuts the inner end of a spring 6, which is interposed between the shank and the adjacent side of the draw-head, whereby the engaging head of the hook is forced inward and is maintained in position for automatically engaging the coupling-hook of another draw-head. The draw-head is perforated adjacent to its mouth to receive a vertical pin 7, which forms a stop to limit the inward swing of the hook, and it engages the shank thereof in rear of the head. The head of the hook is beveled or pointed, as shown, to adapt it to be readily forced laterally against the action of the spring to permit the heads of two hooks to pass each other readily and couple automatically. The head of the hook is also provided with a socket 5

and a perforation 5^a. The socket is adapted to receive an ordinary link, and the perforation 5^a is provided for the reception of a coupling-pin to engage said link. This construction permits the car-coupling to couple with the ordinary pin-and-link car-coupling.

The hook is provided at its outer side with a perforated ear 8, extending outward horizontally in advance of the draw-head and connected by a transverse link 9 with a horizontal arm 10 of a vertical shaft 11. The ends of the transverse link are bifurcated to receive the lug 8 and the arm 10, and it is pivoted to the latter at a point between the ends thereof to provide an extended handle portion, which is adapted to be readily grasped by the operator without going between two cars. When the horizontal arm is drawn outward, the pivoted hook is carried with it to disengage the same and effect the operation of uncoupling.

The vertical shaft 11, which is located at one side of the car 2, as clearly indicated in Fig. 1 of the drawings, is journaled in suitable bearings 13 and is provided at its upper end with a hand-wheel 14. It extends below the bottom of the car-body, and as its lower arm 10 is located beneath the car-body it will not be injured when two cars come together for coupling. The upper portion of the shaft carries a ratchet-wheel 15, which is engaged by a pawl 16, pivotally mounted upon the top of the car and adapted to lock the coupling-hook at one side of the draw-head to prevent coupling while cars are being shifted and switched, as will be readily understood.

The invention has the following advantages: The uncoupling mechanism, which is simple and comparatively inexpensive in construction, is applicable to various car-couplings having laterally-swinging links, and as the uncoupling devices of the car are designed to be located at opposite sides of the same when two cars are coupled the operation of uncoupling may be performed from the tops or either side of the cars without going between them. The horizontal arm at the lower end of the shaft 11 is located beneath the bottom of the car-body, and while it is in position to be readily grasped there is no liability of its being injured when two cars come together for coupling.

By pivoting the inner end of the link-bar 9 to the hook and the outer end to the arm 10 at a point near the inner end thereof the said arm 10 forms a lever and is capable of
5 positively moving the hook inward and outward. This will be found advantageous should cinders or ice or any other matter accumulate in the draw-head and clog the hook. The arm 10 will then enable the hook to be
10 oscillated back and forth a few times to remove or distribute such accumulation sufficiently to cause the hook to work freely under the influence of the spring.

Changes in the form, proportion, and minor
15 details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

The combination with a car, of a draw-head,
20 a laterally-movable hook pivotally mounted within the draw-head and provided at one side with an engaging portion and having a perforated ear at the other side, a transverse

link-bar 9 pivoted at its inner end to the perforated ear and extending therefrom to one
25 side of the car, the rotary vertical shaft 11 journaled in suitable bearings of the car and extending from the top to the bottom thereof, the horizontal arm 10 located at a point below the car-body and extending from the
30 lower end of the shaft 11 and connected near its inner end to the outer end of the link-bar, the outer portion of the arm 10 constituting a handle, a hand-wheel mounted on the upper end of the shaft 11, a ratchet-wheel carried by the shaft and arranged at the top of
35 the car, and a pawl mounted on the latter and engaging the ratchet-wheel, substantially as described.

In testimony that I claim the foregoing as
40 my own I have hereto affixed my signature in the presence of two witnesses.

IVEN J. HOYT.

Witnesses:

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JAOB KING.