

(No Model.)

A. H. GRANT.
CAR COUPLING.

No. 403,531.

Patented May 21, 1889.

Fig. 1.

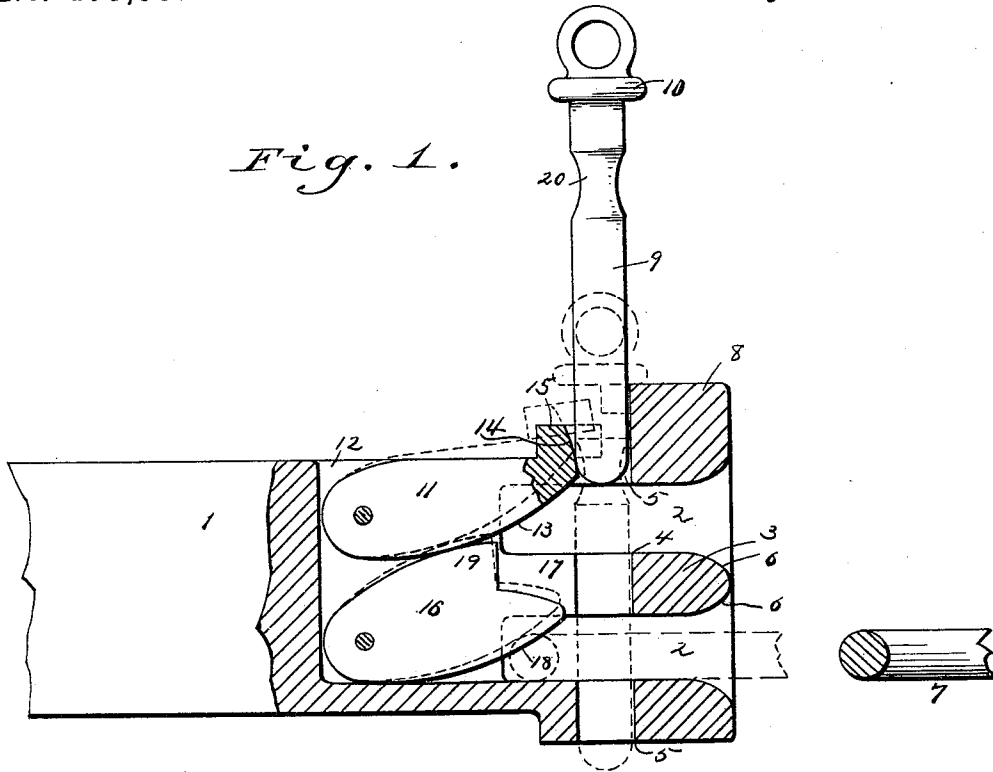


Fig. 2.

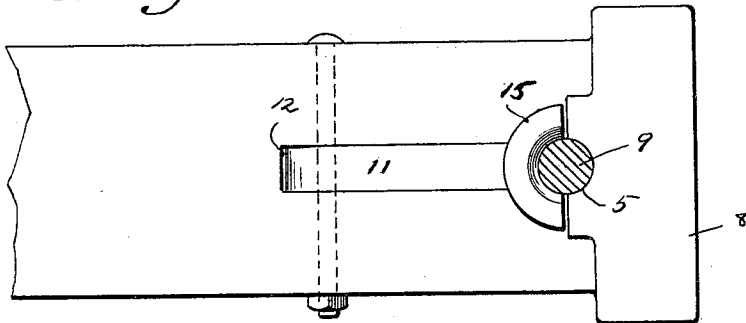
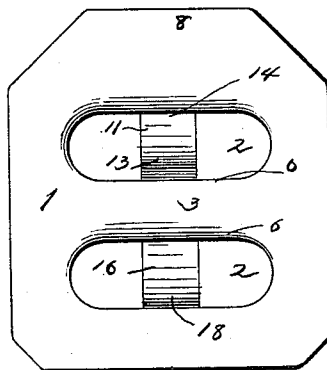


Fig. 3.



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ALEXANDER H. GRANT, OF HOBART, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 403,531, dated May 21, 1889.

Application filed September 8, 1888 Serial No. 284,861. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER H. GRANT, of Hobart, in the county of Delaware and State of New York, have invented a new and Improved Car-Coupling, of which the following is a full, clear, and exact description.

This invention relates to automatic car-couplings, and has for its object to provide an automatic car-coupling by means of which the coupling-pin may be held up in position for coupling, may be automatically coupled by the action of the link, will be prevented from jumping out of its seat, and will not become bent, and by means of which also high and low cars may be coupled.

The invention consists in a car-coupling constructed and arranged as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a vertical longitudinal section of the end of a draw-head, showing the invention and a portion of the coupling-link. Fig. 2 is a plan view of a draw-head constructed in accordance with this invention, with the pin in section; and Fig. 3 is an end view.

In the construction of the invention the draw-head 1 is formed with two recesses, 2, separated by a horizontal plate, 3, cast solid in the draw-head, and having a coupling-pin hole, 4, in line with the holes 5 in the top and bottom of the draw-head. The plate 3 has a beveled edge, 6, to permit the end of a coupling-link, 7, to pass freely into either of the recesses 2. The top of the draw-head 1 is formed at its front with an elevated portion, 8, slightly tapering toward the coupling-pin hole 5 to guide the pin 9 into the same, and also serve as a rest for the flange 10 at the top of the pin and hold it out of engagement with the dog 11 in the draw-head when the pin 9 is in coupled position. The dog 11 is pivoted in a recess, 12, in the top of the draw-head, extending rearward from the hole 5, and is formed with the curved portion 13 on its under side, against which the end of the link 7 is adapted to bear, and with the curved portion 14 at its end, which bears against the lower end of the coupling-pin 9 when the lat-

ter is held in raised position to be coupled, as shown in Fig. 1. The top of the curved portion 14 of dog 11 terminates in a semicircular concave slotted head, 15, in which the flange 10 of pin 9 rests when the pin is in coupled position.

Beneath the dog 11 is pivoted a second dog, 16, located in a slot, 17, extending into the plate 3, and having on its under side a curved portion, 18, extending forward above the bottom of the rear of lower recess 2, and on its upper side a curved shouldered portion, 19, bearing against the under side of dog 11. By means of this construction, as hereinbefore described, the coupling-pin 9 may be set in position for coupling by inserting its lower end in the upper hole, 5, where it will be held by the curved end 14 of dog 11. In this position if the end of link 7 be advanced into the upper recess 2 of draw-head 1, it will bear against the curved portion 13 on the under side of dog 11 and raise the latter, thereby releasing its curved end 14 from the pin 9 and permitting the pin to drop into hole 4 in plate 3 and lower hole, 5, thereby effecting the coupling automatically, with the pin 9 set for coupling, as in Fig. 1. If the end of link 7 on a lower car enters the lower recess 2 in draw-head, it will bear against the curved portion 18 of dog 16 and raise the latter, which will lift the dog 11 and release it from engagement with pin 9, causing the latter, in the same manner as above described, to be automatically coupled. It will thus be seen that the coupling may be readily and automatically effected for either high or low cars. To hold the pin 9 in place after the coupling has been made, the upper portion of the pin is formed with a thinner portion or concave annular slot, 19, in which the curved end 14 of dog 11 is located when the pin 9 is in coupled position, the flange 10 of pin 9 rests on the head 15 of dog 11, and the elevated portion 8 of draw-head 1, holds the pin out of frictional contact with the curved end 14. At the same time that pin 9 is prevented from jumping out of place by curved end 14 of dog 11, projecting into annular slot 20, the link 7 is held in position by its end projecting beneath the curved portion 13 of dog 11. When the end of link 7 projects beneath the dog 16, the link

7 is still more firmly held in position by the combined weight of dogs 11 and 16.

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

1. In a car-coupling, a draw-head formed with horizontal link-recesses located above one another, a pivoted vertically-movable dog having its outer curved end projecting into the coupling-pin hole and across the rear of upper link-recess, and a second pivoted vertically-movable dog located beneath and bearing against the upper dog and having a curved end projecting across the rear of lower link-recess, substantially as shown and described.

2. A car-coupling consisting of draw-head 1, having horizontal link-recesses 2, slot 12, with vertically-movable dog 11 pivoted therein, and having curved portion 13 on its under side projecting across the rear of upper link-recess 2, with curved outer end projecting into pin-hole 5, and having concave slotted head 15, and the vertically-movable dog 16, pivoted in slot 17 beneath dog 11, and having curved portion 18 on its under side projecting across the end of lower link-recess 2, and the should-

dered curved portion 19 on its upper side bearing against the under side of dog 11, substantially as shown and described.

3. A car-coupling consisting of draw-head 1, formed with the front elevated portion, 8, and with coupling-pin hole 5 at its rear, and having horizontal link-recesses 2, slot 12, with vertically-movable dog 11 pivoted therein, and having curved under portion, 13, projecting across the upper recess 2, with curved outer end projecting into pin-hole 5, and having concave slotted head 15 and the vertically-movable dog 16, pivoted in slot 17 beneath dog 11, and having under curved portion, 18, projecting across the end of lower link-recess 2, and the shouldered curved portion 19 on its upper side bearing against the under side of dog 11, in combination with the coupling-pin 9, having annular slot 20 adjacent to its flange 10, substantially as shown and described.

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Witnesses:

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