

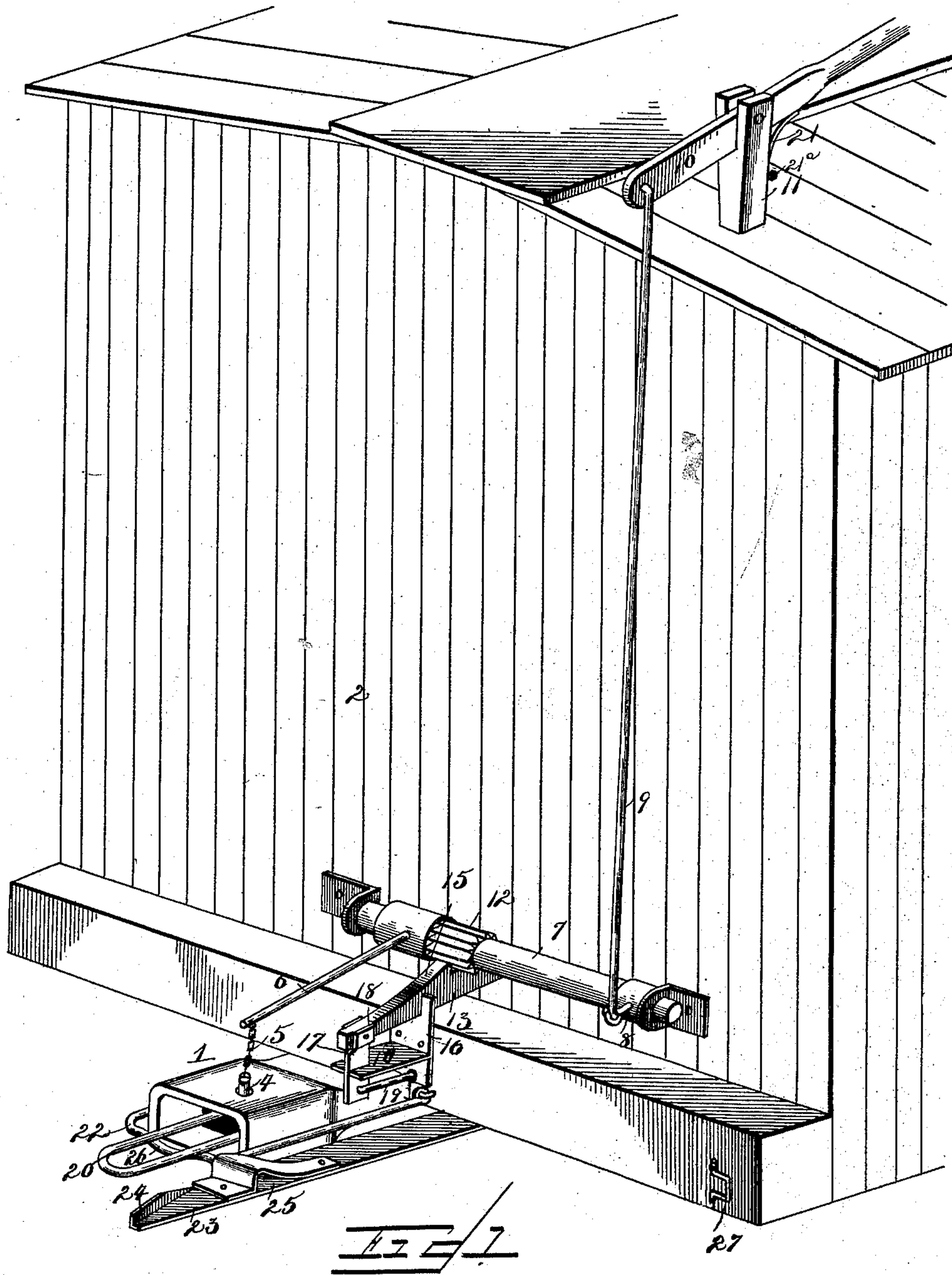
(No Model.)

2 Sheets—Sheet 1.

A. VANDERBECK.
CAR COUPLING.

No. 505,562

Patented Sept. 26, 1893.



Inventor

Alexis Vanderbeck

Witnesses

W. C. Schneider
N. H. Riley

By his Attorneys,

C. A. Snow & Co.

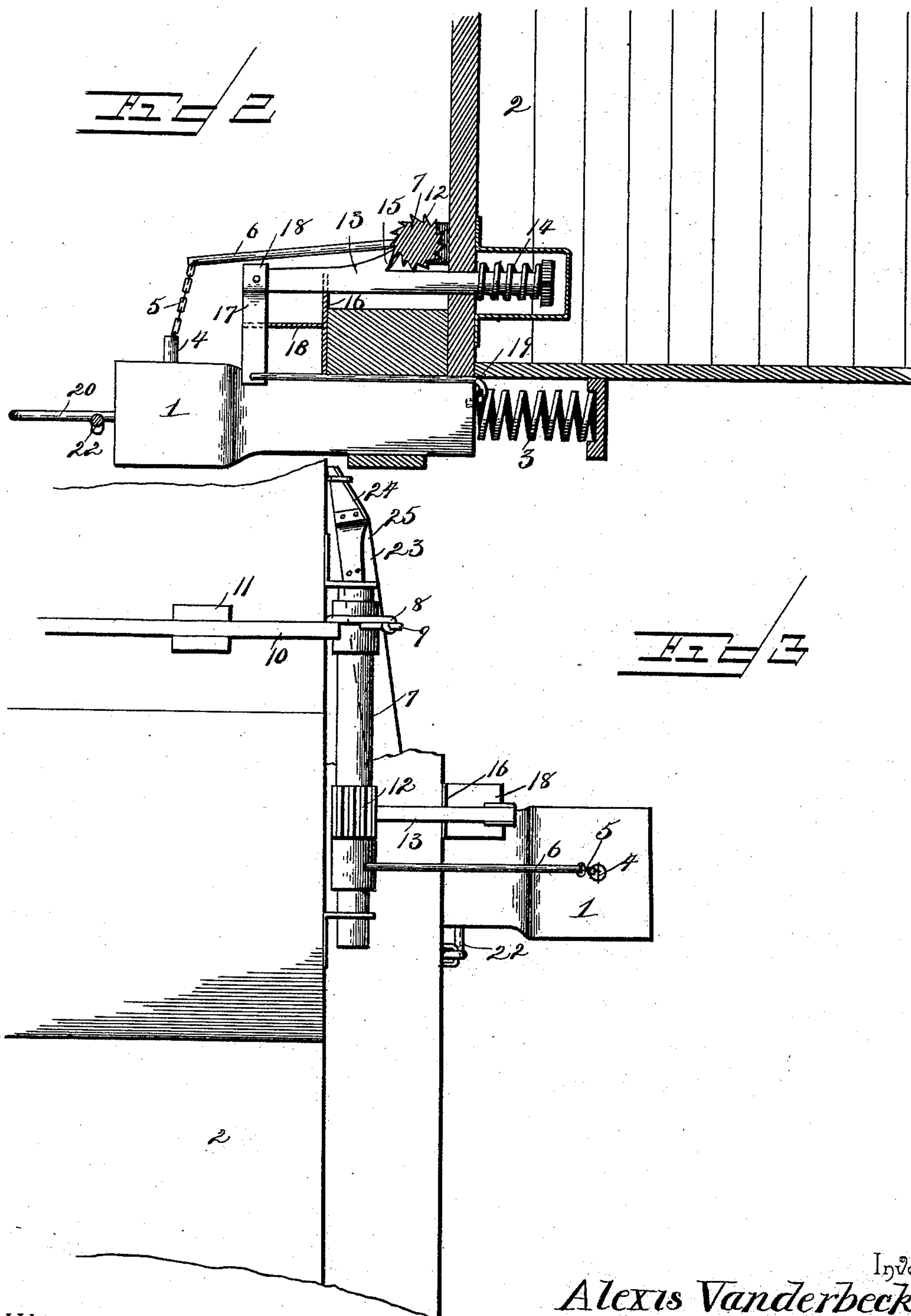
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UNITED STATES PATENT OFFICE.

ALEXIS VANDERBECK, OF HUNTSVILLE, MISSOURI.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 505,562, dated September 26, 1893.

Application filed June 7, 1893. Serial No. 476,838. (No model.)

To all whom it may concern:

Be it known that I, ALEXIS VANDERBECK, a citizen of the United States, residing at Huntsville, in the county of Randolph and State of Missouri, 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 car-couplings and to provide a simple and efficient one, which will enable cars to couple automatically and which will enable them to be readily uncoupled from their tops without necessitating persons going between them.

A further object of the invention is to provide means for supporting a link at the proper elevation to enable it to enter the draw-head of an approaching car, and to remove automatically the supporting means when the link has entered the draw-head to prevent injury to them.

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

In the drawings: Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention, a link being supported in position preparatory to coupling. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a plan view, the pivoted holder being swung to one side to allow the link-support to fall.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a longitudinally-movable draw-head, mounted on a car 2 and cushioned by a spiral spring 3, and receiving a coupling pin 4, which is connected by a chain 5, with an arm 6, of a rock-shaft 7. The rock-shaft 7 is mounted on the car and journaled in suitable bearings and is disposed transversely of the car; and it is provided at one end with the said arm 6, and at its other end with an arm 8, which is connected by a rod 9, with an operating lever 10. The operating lever 10 is fulcrumed on a post 11, which is mounted on the top of the car 2; and the said

operating lever is adapted to have its inner handle-end depressed to rotate partially the rock-shaft 7, to elevate the coupling pin 4. 55

The rock-shaft is provided with ratchet-teeth 12, and is held against turning to maintain the coupling pin in an elevated position by a longitudinally-disposed spring-actuated pawl 13. The spring-actuated pawl 13 is mounted on the car and has its rear or inner end engaged by a spiral spring 14, to hold its tooth 15 in engagement with the ratchet-teeth 12 of the rock-shaft. The front end of the pawl 13 is supported by a guide-plate 16, and is connected to the upper end of a lever 17, which is fulcrumed on a horizontal flange 18, of the guide-plate 16, and has its lower end connected by a rod 19, with the draw-head, whereby when the draw-head is moved inward incident to the operation of coupling when the cars come together, the pawl, through the lever, will be drawn outward from engagement with the ratchet-teeth of the rock-shaft to cause the coupling-pin to fall and engage the link 20. The rear end of the rod 19 is hooked and engages the draw-bar or draw-head, but any other suitable means may be employed for connecting the lower end of the lever with the draw-head. 80

The operating lever is supported by a spring 21, which is secured to the inner end of the operating lever adjacent to the handle portion and engages a stop 21^a of the fulcrum post 11 at the inner face thereof. The spring is adapted to throw the handle portion of the operating lever upward to assist in causing the coupling pin to fall and to prevent the handle portion of the lever counterbalancing the weight of the coupling pin. The link is supported by a rectangular frame 22, which has the inner ends of its sides hingedly connected with the car at opposite sides of the draw-head and is adapted to swing outward and to assume a horizontal position to prevent the link from sagging to guide the link into the draw-head of a car without necessitating going between cars to effect this result. The link-supporting frame is held in a horizontal or other desirable position preparatory to coupling by a pivoted holder 23, which has its inner end pivotally connected to the car and has its outer end beveled and provided with a flange 24. The outer end of 95 100

the pivoted holder is adapted to be engaged by an approaching draw-head after the link has entered the same, and to be moved laterally, owing to its beveled end, to one side to cause the link-holding frame to drop to prevent the frame or the pivoted holder being struck by the approaching car.

The pivoted holder is provided intermediate of its ends with a pocket 25, to receive the adjacent side of the link-holding frame; the pocket is formed by a supplemental plate secured to the upper face of the pivoted holder; and any number of pockets may be arranged in vertical series to enable the link-holding frame to be held at a horizontal position or above or below the same to guide the link into draw-heads of cars whatever may be the height or elevation of such draw-heads.

It will be seen that the car-coupling is simple and inexpensive in construction, that it is positive and reliable in operation, that it is capable of automatic coupling, and that it may be readily uncoupled without necessitating going between cars.

The frame 22 is provided at its supporting end with a bend 26, to prevent the link slipping laterally from it.

Any suitable means may be provided for enabling the rock-shaft to be rotated from the sides of the car.

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

The pivoted holder 23 when not in use is retained against the car to prevent it being injured and to keep it out of the way, by a swinging keeper 27 mounted on the car near one side thereof and arranged to engage the beveled end of the said holder.

What I claim is—

1. In a car coupling, the combination of a car, a rock-shaft mounted on the car and provided with a forwardly-extending arm, a draw-head capable of longitudinal movement and mounted on the car, a coupling pin connected with the arm of the rock-shaft, means for turning the rock-shaft to elevate the coupling pin, and a pawl engaging the rock-shaft and connected with the draw-head and adapted to be withdrawn from engagement with the rock-shaft by an inward movement of the draw-head, substantially as described.

2. In a car coupling, the combination of a car, a rock-shaft journaled thereon and provided with ratchet-teeth, a draw-head mounted on the car, a coupling pin connected with the rock-shaft, a pawl engaging the ratchet-teeth of the rock-shaft, and a lever fulcrumed on the car and having one end connected to the pawl and its other end with the draw-head, substantially as described.

3. In a car-coupling, the combination of a car, a draw-head mounted thereon, a horizontal rock-shaft journaled on the car and provided with a forwardly-extending arm and

having ratchet-teeth, a coupling pin connected with and carried by the arm of the rock-shaft, a longitudinally-disposed spring-actuated pawl mounted on the car and engaging the teeth of the rock-shaft, a lever fulcrumed on the car and having its upper end connected to the spring-actuated pawl and its lower end connected with the draw-head, and means for turning the rock-shaft, substantially as described.

4. In a car coupling, the combination with a car, a draw-head mounted thereon, a horizontal rock-shaft provided with forwardly-extending arms and having ratchet-teeth, a coupling pin connected with and carried by one of the arms, an operating lever fulcrumed at the top of the car and extending outward and connected with the other arm of the rock-shaft, a spring engaging the inner portion of the operating lever to repress the outer portion, a spring-actuated pawl mounted on the car and engaging the ratchet-teeth of the rock-shaft, and a lever fulcrumed on the car and having its upper end connected to the pawl and its lower end connected with the draw-head, substantially as described.

5. In a car coupling, the combination of a car, a draw-head mounted thereon, a rock-shaft provided with ratchet-teeth and having a forwardly-extending arm, a coupling pin connected with and carried by the arm, a spring-actuated pawl mounted on the car and engaging the ratchet-teeth of the rock-shaft, a guide-plate secured to the car and receiving and supporting the pawl and provided with a horizontal flange, and a lever fulcrumed on the horizontal flange and pivoted to the pawl and connected with the draw-head, substantially as described.

6. In a car coupling, the combination of a car, a draw-head, a link-supporting frame hingedly connected with the car at the sides of the draw-head and adapted to swing upward in advance of the draw-head for supporting a link, and a horizontally-swinging holder supporting the frame and having its front end beveled at the inner side and adapted to be moved laterally by an approaching car to cause the link-supporting frame to drop, substantially as described.

7. In a car coupling, the combination of a car, a draw-head, a rectangular link-supporting frame hingedly connected with the draw-head, and a holder having its inner end pivotally secured to the car and having its outer end beveled and adapted to be moved laterally by an approaching car and provided with a pocket receiving the link-supporting frame, substantially as described.

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

ALEXIS VANDERBECK.

Witnesses:

JNO. N. HAMILTON,
R. G. TERRILL.