

(No Model.)

J. DWYER.
CAR COUPLING.

No. 432,697.

Patented July 22, 1890.

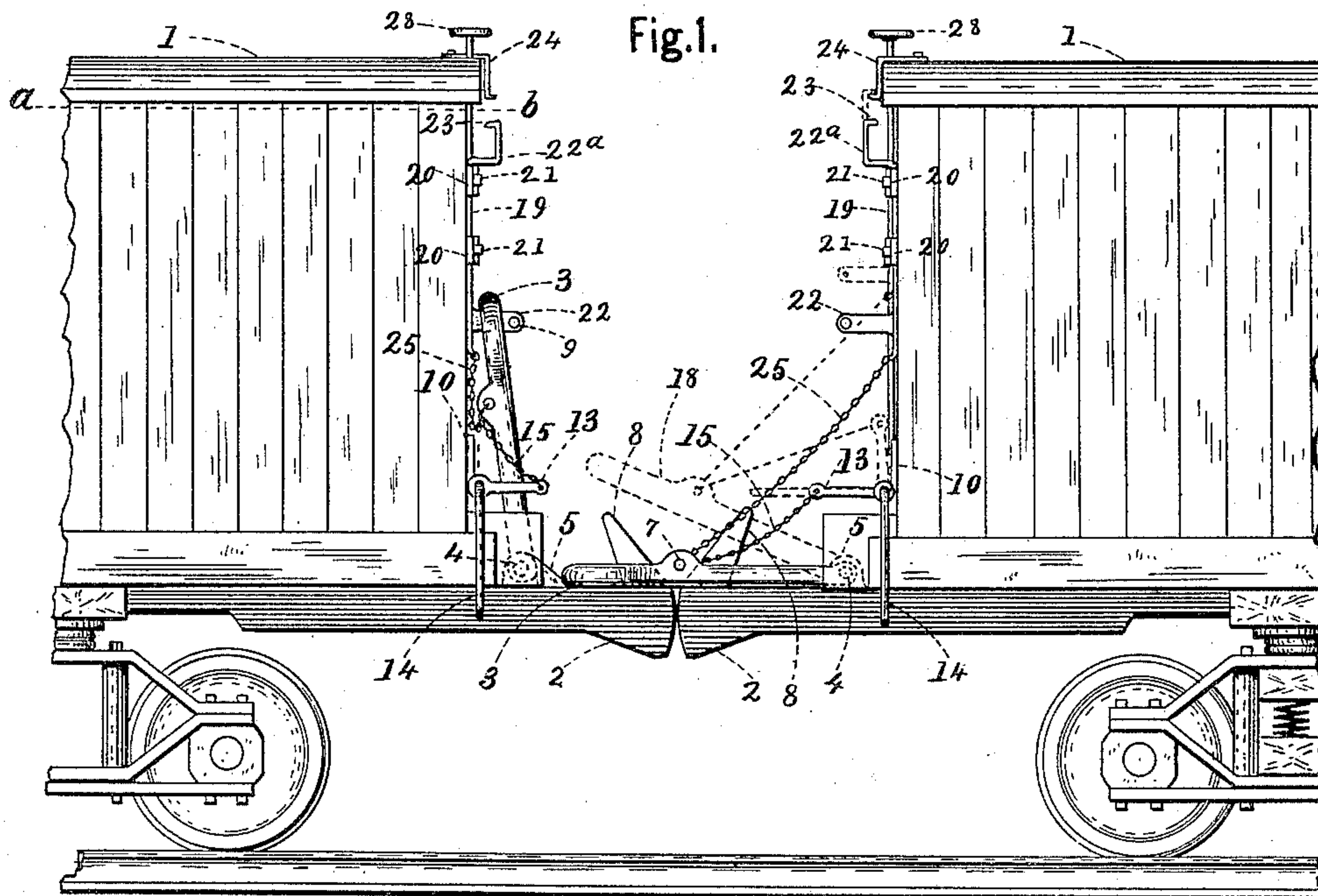


Fig.2.

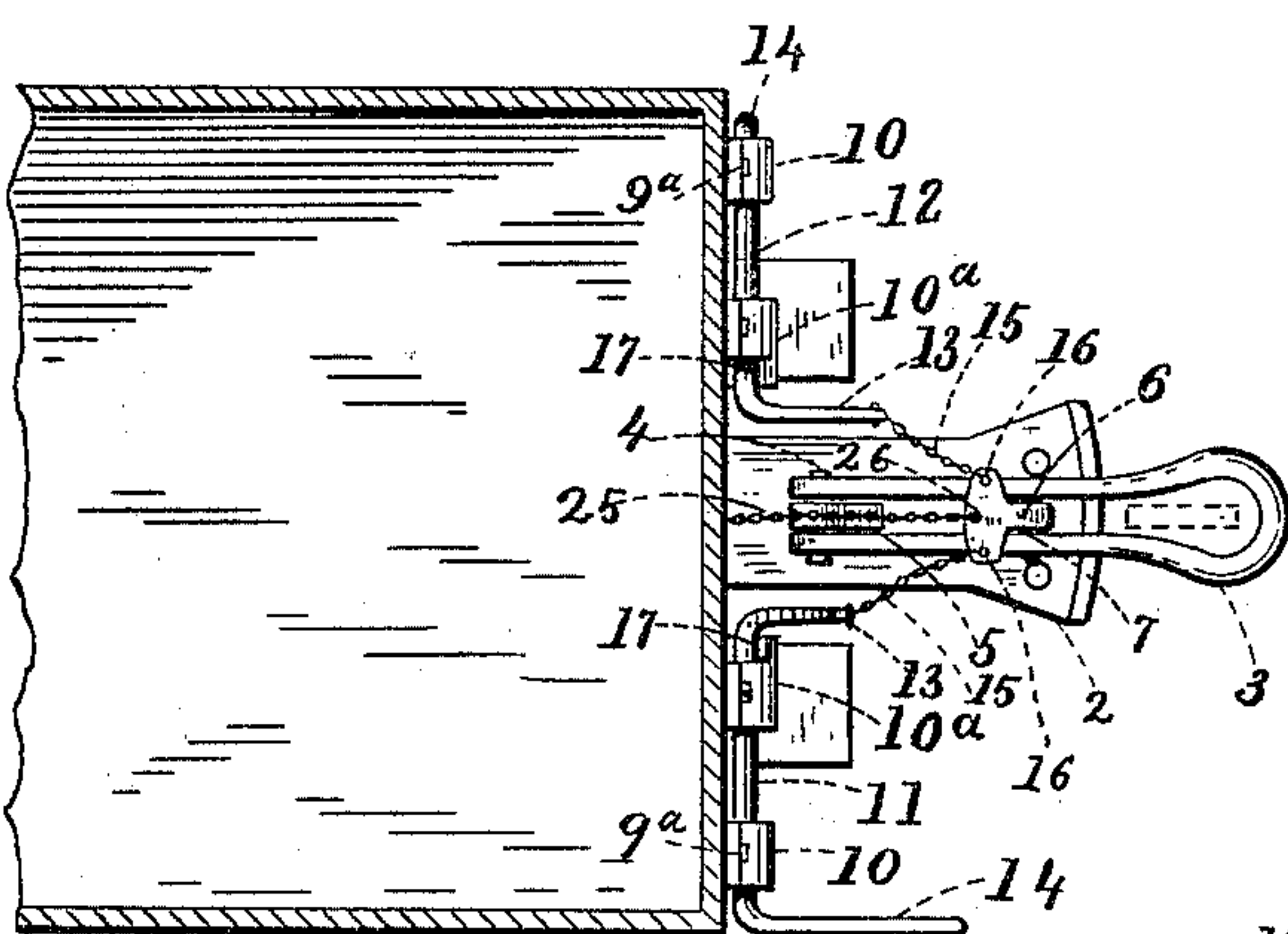


Fig.3.

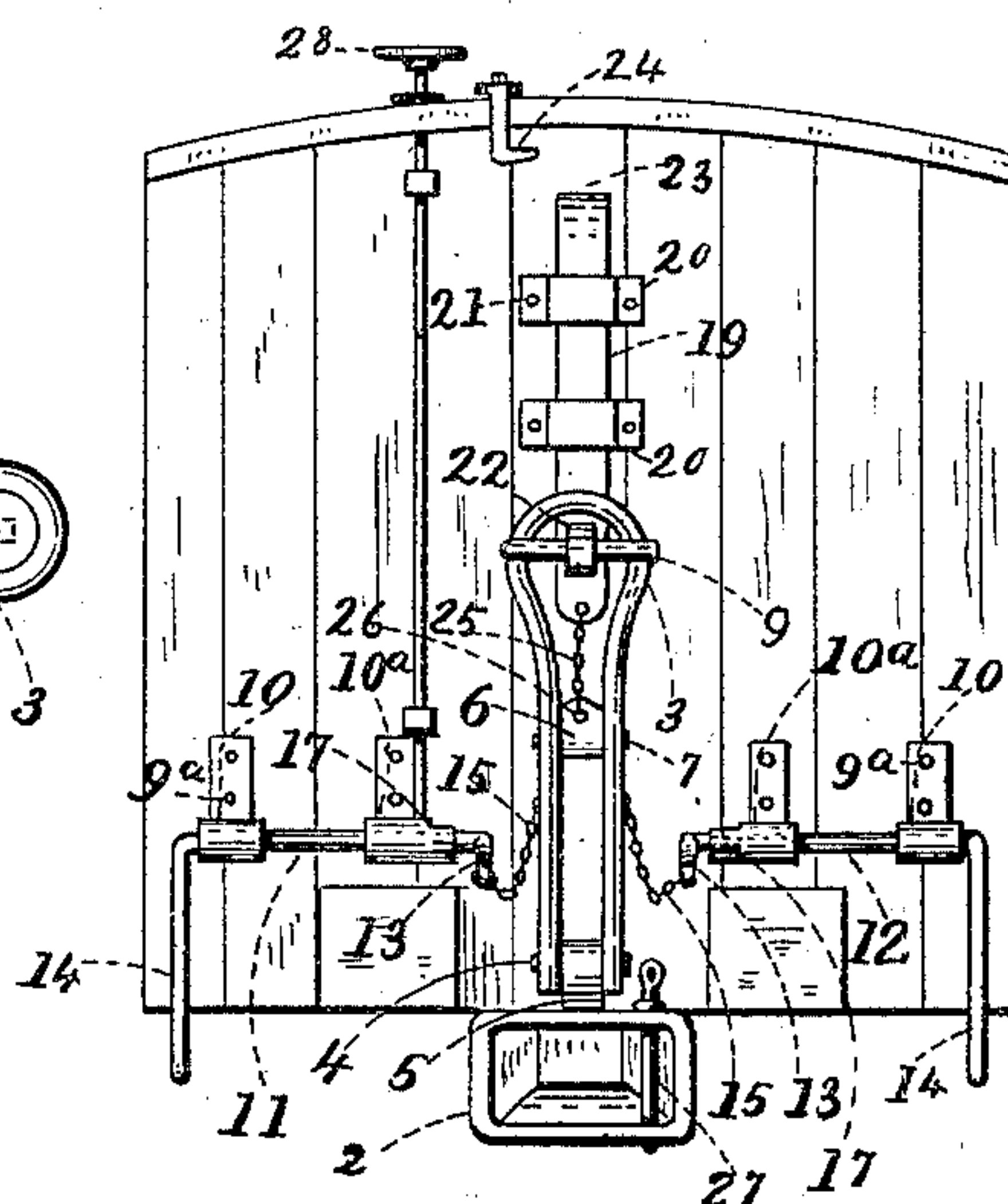
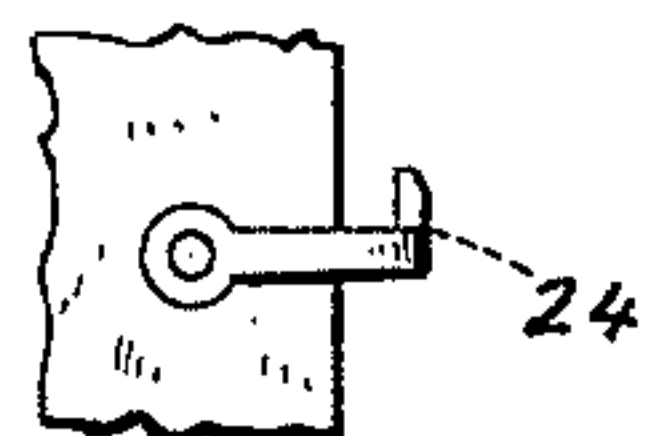


Fig.4.



Witnesses.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 432,697, dated July 22, 1890.

Application filed May 27, 1890. Serial No. 353,286. (No model.)

To all whom it may concern:

Be it known that I, JOHN DWYER, a citizen of the United States, residing at East Pembroke, in the county of Genesee and State of New York, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

The object of my invention is to produce an automatically-acting coupling for railway-cars, capable of being operated and used from either side of a car or from the top of the same, and of being easily operated and used even if one of the coupling-links should be broken, and also capable of being practically used if both coupling-links should become disabled, by means of a construction which provides for the substitution of a common link and pin when required, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation showing portions of two cars to which the coupling is attached. Fig. 2 represents a horizontal section in or about line *a b*, Fig. 1, showing a plan of the coupling and that portion of the mechanism for operating the link from either side of the car, the mechanism for raising and operating the link from the top of the car being omitted, except a portion of the chain connected therewith. Fig. 3 is an end elevation showing the end of a car and a front view of the coupling and its several parts, the coupling-link being turned up in a vertical position and secured. Fig. 4 represents a small portion of the top of a car, showing a top view of the pivoted catch for holding the link up or releasing it when operated from the top of the car.

In said drawings, 1 represents a portion of an ordinary freight-car, 2 the usual draw-head, all of which are made in any well-known way, and as they form no part of my invention alone, in themselves considered, a further description of the car and its usual connecting portions is not required here.

The coupling-link 3 consists of a bent bar having its ends pivoted loosely (so as to fall by its own gravity) by a pin 4 to an upwardly-projecting piece 5, rigidly secured to or forming a portion of the draw-head 2. At some convenient point near the longitudinal cen-

ter of the coupling-link is a holding-piece 6, pivoted thereto by a pin 7, and at or near the front of the draw-head is a backwardly-inclined upwardly-projecting holding-piece 8, (shown in Fig. 1 only, it being omitted in Figs. 2 and 3 so as to show the other parts more clearly,) either forming a part of the draw-head or rigidly secured to it. Every car is provided at both ends with one of these coupling-links and their several operating parts, as above described, so that when two cars are coupled together one of the coupling-links only is used, the other being turned up out of the way, substantially as shown in Figs. 1 and 3, and secured by a cross-pin 9. The object of this construction is to provide a link always ready for use in case the other fails.

To each end of a car are secured by the usual bolts or screws 9^a four bearings 10 and 10^a—two at each side of the car—in each pair of which is mounted the bars or shafts 11 and 12, (shown in Figs. 2 and 3,) both of which are bent so as to form the arms 13 and 14. To the ends of the arms 13 is secured a chain 15, the opposite ends of which are attached to the holding-piece 6 at the points 16. (See Fig. 2.) The arms 14 are the arms by which the device is operated, and are located at or near opposite sides of the car. The bearings 10^a are each provided with an offset 17, so that by raising either of the arms 14 up and then drawing it toward the side of the car (thereby moving the shaft 11 or 12 longitudinally in its bearing) until the arm 13 rests upon the portion 17, when it will be held in its raised position and thereby hold the link up in the position shown by the dotted lines 18 in Fig. 1, which operation holds it uncoupled from the opposite car, as will be readily seen. It is easily released by pushing the arm 13 back again away from the offset 17, when it instantly falls to its normal position. From this construction it will be seen that the bars 11 and 12, with their arms 13 and 14, are independent of each other, so that either can be operated separately at opposite sides of the car without interfering with the other.

The device for operating the links from the top of the car consists of a vertical bar 19, secured in position, so as to be easily

moved up or down, by the caps 20, by which
 it is secured to the end of the car by bolts or
 screws 21. It is provided with an outwardly-
 projecting arm 22, over which the upper end
 5 of the link passes, and is secured by the pin
 9, as shown in Figs. 1 and 3. The upper part
 of the bar 19 is bent forward and then up at
 or about the point 22^a and terminates in an
 inwardly-bent portion 23. At the top of the
 10 car is a pivoted catch 24, adapted to be moved
 so as to catch under the portion 23 when it
 is desired to hold the bar 19 in its upward po-
 sition. At the lower end of the bar 19 is a
 small perforation, to which is secured a chain
 15 25, having its opposite end attached to the
 holding-piece 6 at the point 26. (Shown in
 Figs. 2 and 3.) From this construction it
 will be seen that by raising the bar 19 up-
 ward the coupling-link 3 will also be lifted
 20 up, and may be held up in its position (shown
 by the dotted lines in Fig. 1) by fastening it
 with the catch 24, as before mentioned.

In the event of both coupling-links being
 disabled the cars may be coupled together
 25 by the common and well-known link by
 means of the ordinary link-pin 27. (Shown
 in Fig. 3.)

In coupling cars by this device all that is
 necessary is to leave the link free, so that it
 30 will lay in its lower position, the link on one
 car being secured in an upward position, as
 hereinbefore mentioned. The two cars being
 now run together the end of the free link is
 raised up by the inclined face of the holding-
 35 piece 8 until it passes over the top, when it
 drops into the position shown in Fig. 1, thus
 automatically coupling the cars together, from
 which it may be easily and conveniently re-
 leased in the manner heretofore described.
 40 By this means all danger of accident to the
 operator is avoided, as it is entirely unnec-
 essary to get between the cars at any time to
 either disconnect or connect the cars, and it
 may be operated at either side of the car or
 45 at the top of the same conveniently near the
 brake-wheel 28, so that in case of emergency
 it will be within easy reach of the brakeman.

I claim as my invention—

1. The combination of a pivoted gravity-
 50 link adapted to drop over and connect with
 a holding-piece on an opposite car in the act
 of coupling therewith, two independently-act-
 ing arms for operating the link connected with
 the link by chains and mounted in bearings
 55 on the end of the car so as to be capable of a
 longitudinal or lateral movement therein, an

offset in one of the bearings for each arm in
 which the arm is moved and held in an ele-
 vated position, and arms for operating the
 same, substantially as described. 60

2. In a car-coupling, the combination of a
 pivoted link adapted to fall by its own grav-
 ity over a holding-piece on an opposite car
 while in the act of coupling therewith, a ver-
 tically-movable bar mounted in vertical bear- 65
 ings on the front of the car and having a hook
 portion 23 at the top and connected with the
 coupling-link by a chain at the lower end,
 and a pivoted catch at the top of the car for
 engaging with it and holding it when drawn 70
 up to raise the link for coupling or uncoup-
 ling from the top of a car, substantially as de-
 scribed.

3. In a car-coupling, the combination of a
 pivoted gravity-link adapted to drop over and 75
 connect with a holding-piece on an opposite
 car in the act of coupling therewith, two in-
 dependently-acting arms for operating the
 link connected with it by chains and mounted
 in bearings on the end of the car so as to be ca- 80
 pable of a lateral movement therein, an offset
 in one of the bearings for each arm in which
 the arm is moved and held in its elevated po-
 sition, arms for operating the same and there-
 by raising and lowering the link, a vertically- 85
 movable bar mounted in vertical bearings on
 the front of the car and having a hook por-
 tion 23 at the top and connected with the
 coupling-link by a chain at the lower end, and
 a pivoted catch at the top of the car for en- 90
 gaging with it and holding it when drawn up
 to raise the link, whereby two cars may be
 coupled together or uncoupled from either
 side of the car or from the top of the same,
 substantially as described. 95

4. In a car-coupling, the combination, with
 two cars, of pivoted gravity-links, mechanism,
 substantially as above described, for operat-
 ing them, a projecting arm on each car over
 which a link is thrown when not required for 100
 use, a pin for securing the link in such posi-
 tion, an inclined holding-piece on the draw-
 head of each car adapted to receive and
 couple with the free link of the opposite car,
 whereby one link may be reserved for use 105
 when the link on the opposite car is disabled,
 substantially as hereinbefore described and
 set forth.

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Witnesses:

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