(No Model.)

J. D. MAJORS.

CAR COUPLING.

No. 566,991. Patented Sept. 1, 1896.

Fig. 1.

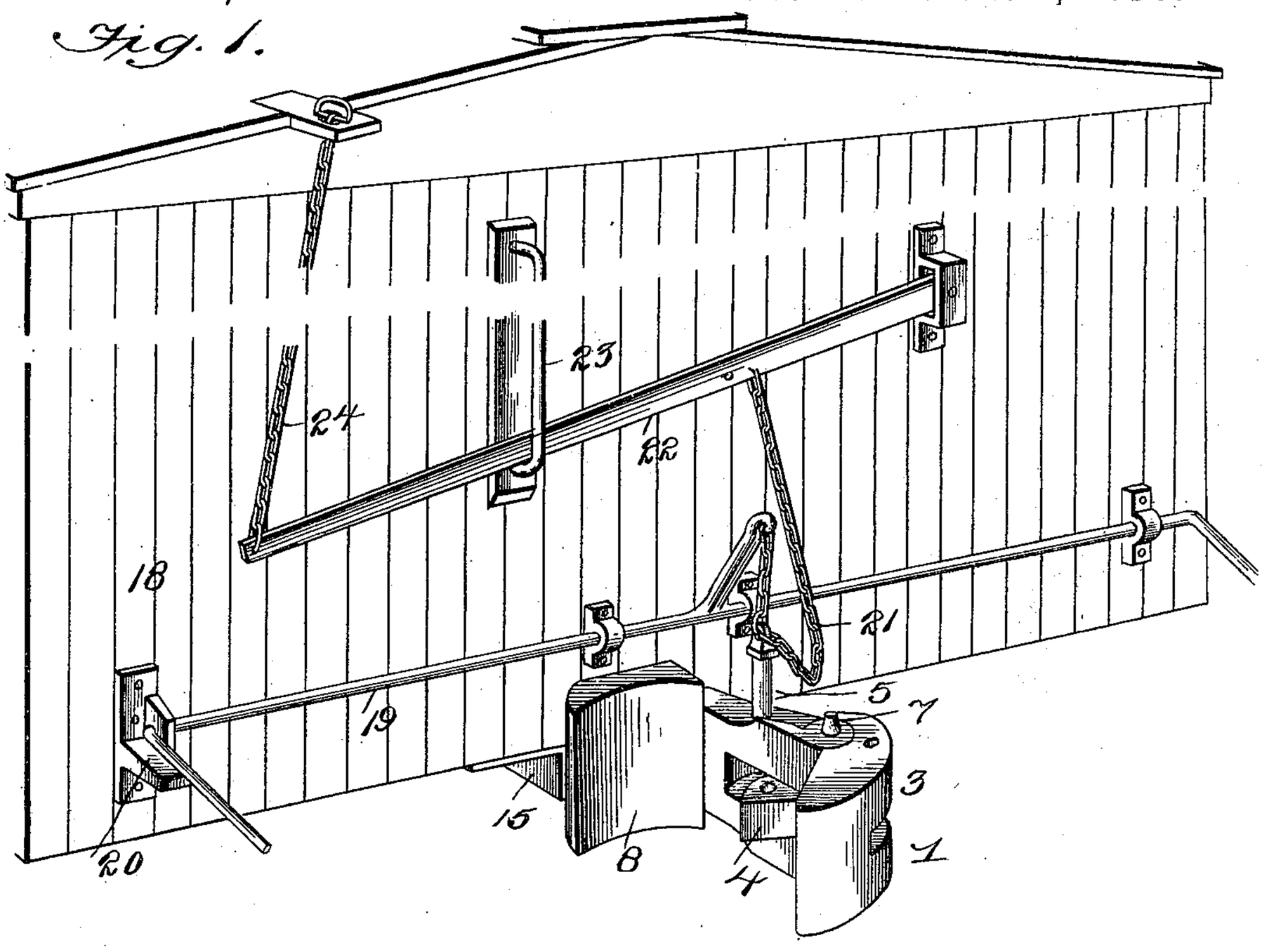


Fig. 2.

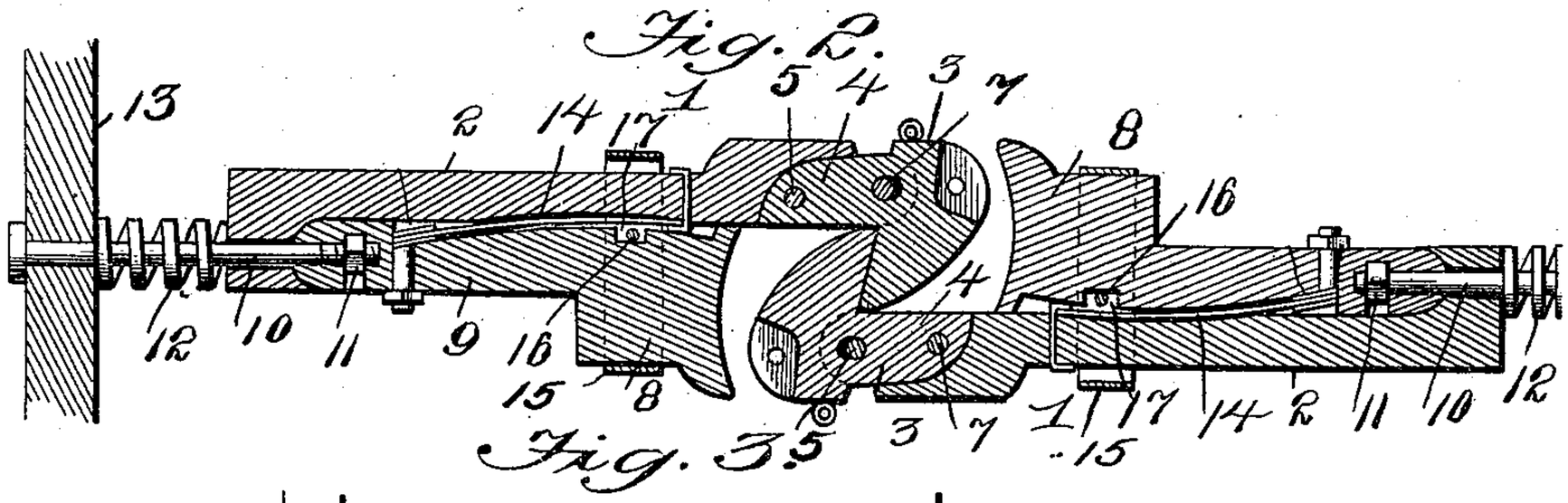
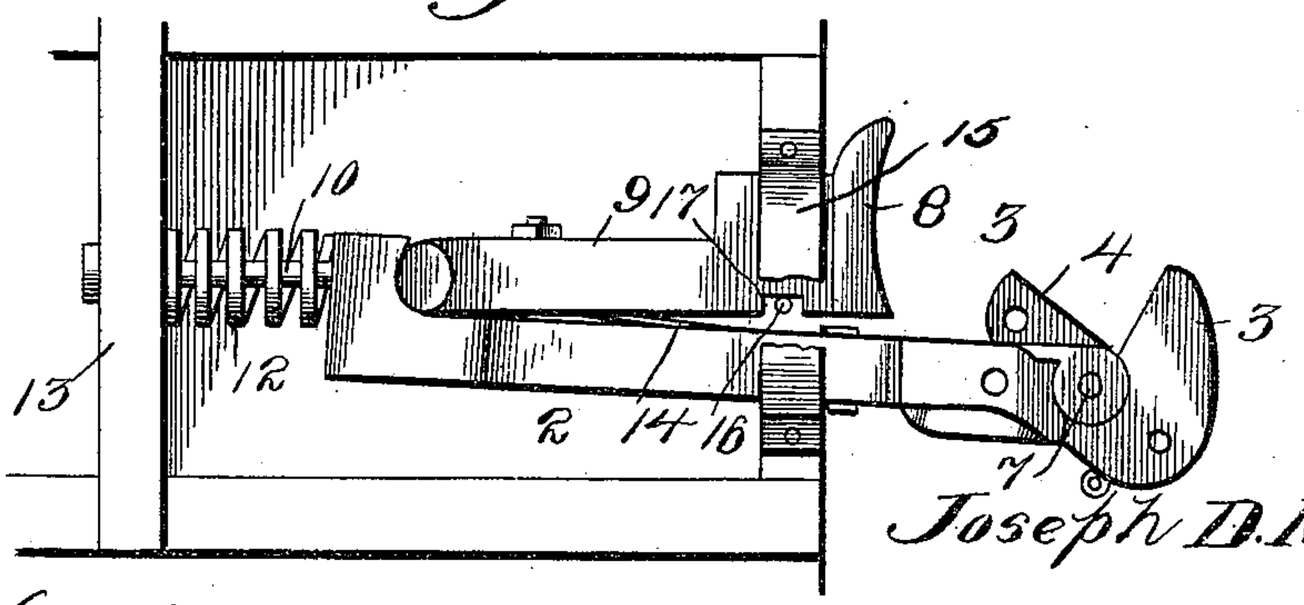


Fig. 3.



Witnesses
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Inventor
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By his Attorneys,
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UNITED STATES PATENT OFFICE.

JOSEPH DANIEL MAJORS, OF MACEDONIA, ALABAMA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 566,991, dated September 1, 1896.

Application filed February 3, 1896. Serial No. 577,876. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH DANIEL MAJORS, a citizen of the United States, residing at Macedonia, in the county of Lowndes and State of Alabama, have invented a new and useful Automatic 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, inexpensive, and efficient one capable of coupling automatically, and adapted to be readily uncoupled from the top and sides of cars without going between them.

A further object of the invention is to improve the construction of car-couplings, to enable cars to couple on the sharpest curves, and to provide one which will couple cars closely together, and which will be automatically uncoupled in the event of a car becoming derailed or overthrown.

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 and shown applied to a car. Fig. 2 is a horizontal sectional view showing two draw-heads coupled. Fig. 3 is a reverse plan view.

1 designates a draw-head having a rearwardly-extending bar or shank 2, and carrying a pivoted knuckle 3, which is provided with an arm 4, arranged to swing in a horizontal recess or opening of the draw-head, and adapted to be engaged by a pin 5, arranged in a perforation of the draw-head, the arm being provided with a corresponding perforation for the reception of the pin. The knuckle is provided at its outer end with a link-receiving recess, and it has a coupling-pin perforation to enable it to be readily coupled with cars having the ordinary pin-and-link couplings. The knuckle is adapted to engage a corresponding one of another draw-head, and its perforation for the reception of the knuckle-pin 7 is sufficiently large to prevent the pin 7 from being struck and injured when two cars come together for coupling. A bumper or buffer 8 coöperates with the knuckle and is located in rear of the hinging portion thereof and has an outer face which is slightly curved to conform slightly to the configuration of the outer face of the knuckle. The bumper or buffer is provided with a shank 9, arranged parallel with the draw-bar and hingedly connected with the same at the rear end thereof by a tail-pin 10, which is arranged in an enlarged perforation of the draw-bar, and which is secured at its outer end to the shank of the bumper or buffer 8. The outer end of the tail-pin is threaded to engage a nut 11, but any other suitable means may be provided to effect such attachment; and the rear end of the tail-pin passes through a transverse bar 13 of the draw-timbers, and is provided with a head, a spring 12 being disposed on the tail-pin and interposed between the rear end of the draw-bar and the transverse bar 13. The rear end of the draw-bar is enlarged and extended laterally. Its front or outer portion is curved to form a partial socket, and a rear or inner end of the shank 9 is rounded to conform to the configuration of the partial socket. This construction effects, with the tail-pin, the hinged connection between the shank and the draw-bar.

The shank and the draw-bar are connected by a spring 14, interposed between them and having its terminals secured by suitable clips to the same. The rear end of the spring is secured to the shank, and its front end is attached to the draw-bar, which is adapted to swing outward when two cars come together for coupling, to enable the couplings to pass each other. As soon as the knuckles pass each other the spring throws them inward and holds them in engagement with each other. The outer faces of the knuckles are rounded and beveled, and the operation is automatically effected when the two knuckles are closed without injury to them.

The shank and the draw-bar are supported within a keeper 15 or other suitable support, and the former is held against lateral movement by a pin 16, which is mounted in the keeper or support and which is arranged in a recess 17 of the shank.

The operation of uncoupling is performed from the sides of a car 18 by a transverse

rock-shaft 19, having a central arm which is connected with the pin 5 by a chain or the like. The ends of the rock-shaft are provided with handles, and one of the brackets or journals in which the rock-shaft is mounted is provided with a shoulder 20 to receive the adjacent handle of the rock-shaft for the purpose of supporting the pin 5 in an elevated position. The pin 5 is also connected by a chain 21 with a lever 22. The latter is fulcrumed at one end to the end of the car and is arranged in a keeper 23, and the other end of the lever is connected by a chain 24 with the top of the car, to enable the operation of uncoupling to be performed from that point. The knuckle is also provided at its outer side with an eye to enable a lever or other suitable operating mechanism to be connected with it for the purpose of opening the knuckle.

It will be seen that the car-coupling is simple and inexpensive in construction, that it is positive and reliable in operation, and that it is capable of coupling automatically and of being readily uncoupled from the top and sides of cars without going between them.

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

What I claim is—

1. In a car-coupling, the combination of a bumper or buffer provided with a shank, a draw-head having a draw-bar hingedly connected with the shank and arranged to swing outward, a knuckle pivoted to and carried by the draw-head and having its engaging side located in front of and coöperating with the bumper or buffer, and means for automatically swinging the draw-head inward, substantially as and for the purpose described.

2. In a car-coupling, the combination of a bumper or buffer provided with a shank, a draw-bar arranged contiguous to the shank and hingedly connected with the rear end thereof, a flat spring interposed between the draw-bar and the shank and having one end connected to the former, and its other end connected to the latter, and a knuckle carried by the draw-head and having its engaging side located in advance of and coöperating with the bumper or buffer, substantially as described.

3. In a car-coupling, the combination of a bumper or buffer provided with a shank rounded at its inner end, a draw-head having a draw-bar enlarged at its inner end, extended laterally and rounded to receive the adjacent end of the shank, a pin disposed longitudinally of the car-coupling and passing through the enlarged end of the draw-bar and secured to the shank, and a knuckle carried by the draw-bar, substantially as described.

4. In a car-coupling, the combination with a car of a shank mounted thereon and provided at its outer end with a bumper or buffer and having a recess at one side, a pin arranged within the recess, a draw-bar arranged contiguous to the shank and forming a bearing for the rear end thereof, a tail-pin connected with the car, extended through the rear end of the draw-bar and secured to the shank, a spring disposed on the tail-pin and interposed between the draw-bar and the car, a knuckle carried by the draw-bar, and means for operating the knuckle, substantially as and for the purpose described.

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

JOSEPH DANIEL MAJORS.

Witnesses:
S. A. TILL,
N. R. TILL.