(No Model.) 2 Sheets—Sheet 1.

D. W. HAUSAM.

CAR COUPLING.

No. 503,347. Patented Aug. 15, 1893.

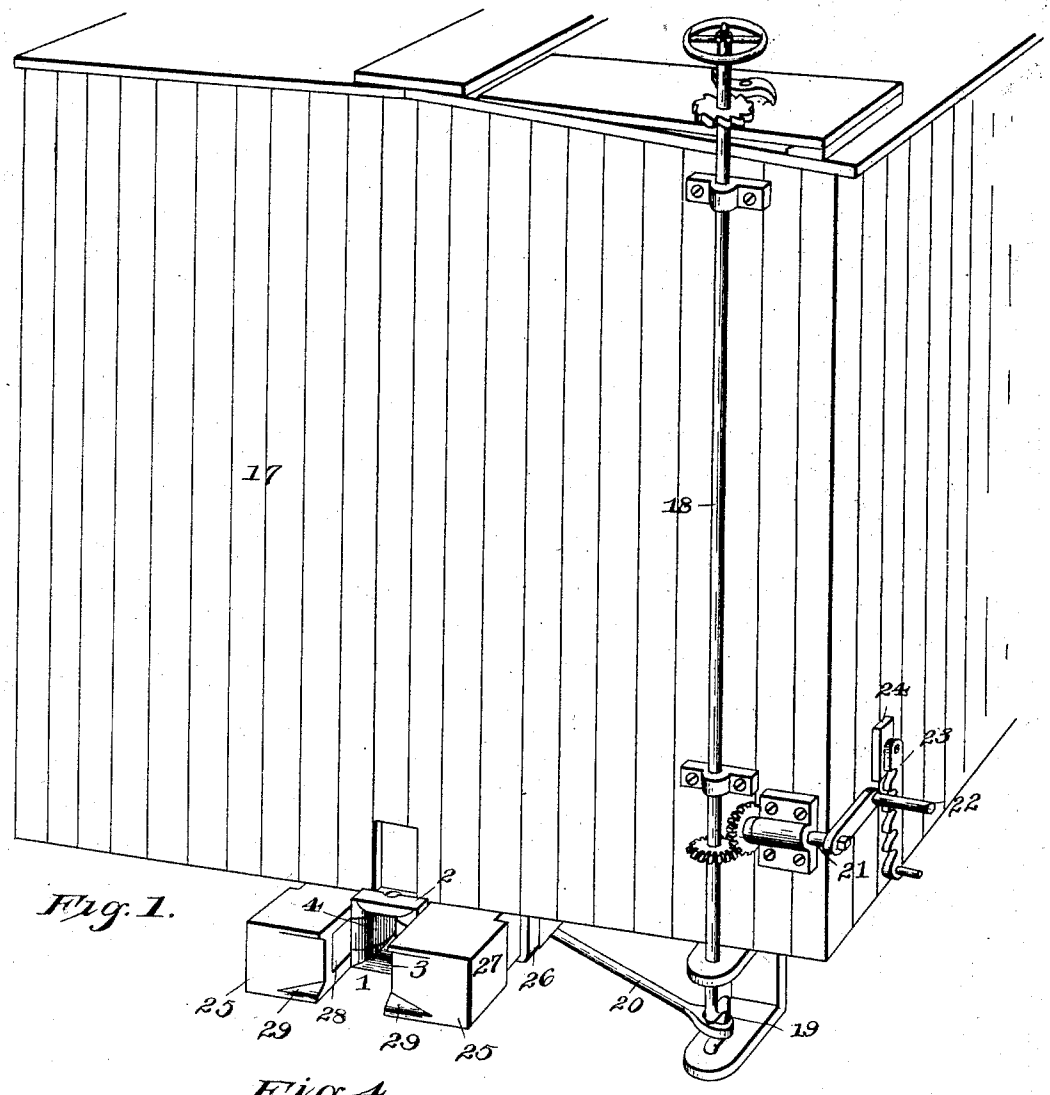


Fig. 1.

Fig. 4.

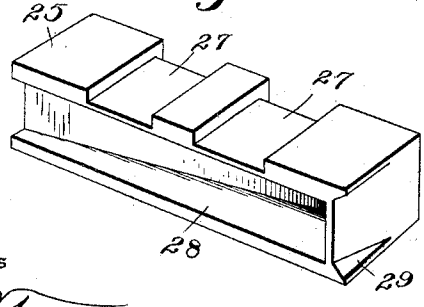
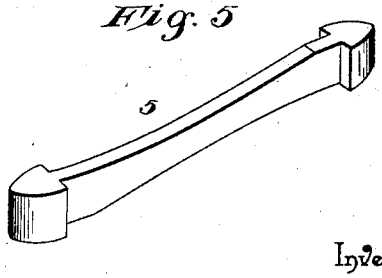


Fig. 5



Witnesses

Inventor

D. W. Hausam.

By his Attorneys,

C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

D. W. HAUSAM.

CAR COUPLING.

No. 503,347. Patented Aug. 15, 1893.

Fig. 2.

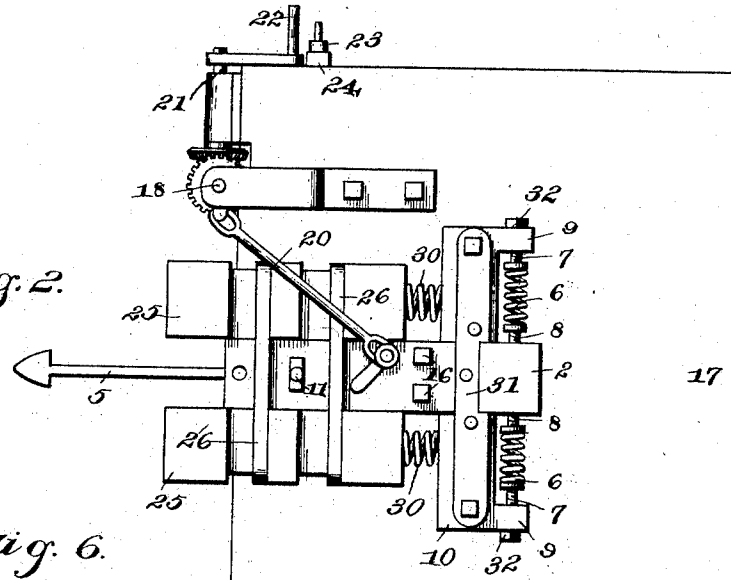


Fig. 6.

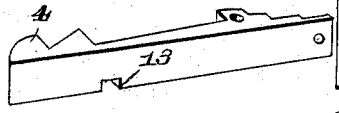


Fig. 7.

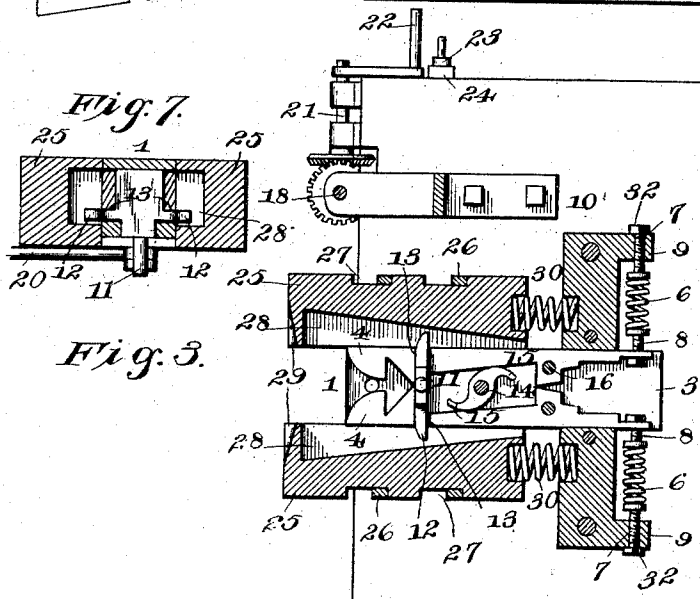


Fig. 3.

Witnesses

C. A. Ford

N. J. Riley

Inventor

D. W. Hausam.

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

DANIEL WHITFIELD HAUSAM, OF DALLAS, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 503,347, dated August 15, 1893.

Application filed April 28, 1893. Serial No. 472,220. (No model.)

To all whom it may concern:

Be it known that I, DANIEL WHITFIELD HAUSAM, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, 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 one which will be simple and efficient in construction, positive and reliable in operation, and capable of automatic coupling.

A further object of the invention is to provide a car-coupling which will not necessitate persons going between cars, and which will, should a car be overturned, become automatically uncoupled to prevent a derailed car dragging others after it down an embankment.

Another object of the invention is to lessen the jars and strains incident to coupling and running.

The invention consists of 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. Fig. 2 is a reverse plan view. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail perspective view of one of the bumpers. Fig. 5 is a detail view of crooked link. Fig. 6 is a detail view of one of the jaws. Fig. 7 is a detail transverse sectional view of the draw-head and bumpers.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the draw-head composed of upper and lower plates 2 and 3, and having open sides receiving pivoted jaws 4, which are adapted for engaging an arrow-headed link 5. The jaws are pivoted near their rear ends and are connected with a pair of laterally-disposed spiral springs 6, having screws 7 and 8, at their ends connected respectively with the rear ends of the shanks of the jaws and with lugs or extensions 9, of blocks 10. The upper and lower plates of the draw-head are separated near their front ends by a partition 11, having lateral extensions 12, arranged in recesses 13, of the spring-actuated jaws and serving as guides and supports for the latter. The jaws are regulated by means of the screws at the ends of the springs, so that the tension of the latter may be readily adjusted to impart to the jaws the desired strength. The jaws are separated for uncoupling by a crank 14, mounted on the draw-head and extending upward between the jaws and provided with similarly-curved arms 15, which, when the crank is turned, alternately engage the inner faces of the spring-actuated jaws in advance of their pivots 16 and spread or open the jaws to permit the withdrawal of the link. This operation may be performed from the top of a car 17, by a vertical shaft 18, having a hand-wheel at its upper end and a crank-bend 19 at its lower end, which crank-bend is connected by a rod 20, with the crank 14. The vertical shaft is provided at its top with an ordinary pawl-and-ratchet and is connected, near its lower end, by bevel gearing with a horizontal shaft 21, provided at its outer end with a crank-handle 22, adapted to be engaged by a swinging rack-bar 23, to hold the jaws separated. The rack-bar is pivoted at its upper end to a ratchet-block 24, and is provided at its lower end with a handle and has a series of recesses for engaging the crank-handle of the horizontal shaft. The ordinary brake mechanism may be employed for this purpose, but that shown and described is preferable, as it is more positive and reliable, especially in uncoupling.

Spring-actuated bumpers 25 are arranged at the sides of the draw-head and are secured in position by rectangular clips 26, extending across the bottoms of the draw-head and the bumpers and up the outer sides of the latter, and are secured to the car. The rectangular clips are arranged in recesses of the lower plate of the draw-head and in elongated recesses 27 of the bumpers, and serve to limit the longitudinal movement of the latter. The bumpers are provided at their inner sides with tapered recesses 28, to permit the spreading of the jaws, and they have their outer ends 29 beveled, as shown, to assist in directing a link into the mouth of the draw-head. The rear ends of the bumpers are provided with sockets to receive spiral springs 30, which have their rear ends seated in similar sockets

of the blocks 10. The rear end of the coupler is secured to the blocks 10 by a transverse plate 31, which has a central recessed portion arranged in a corresponding recess of the bottom plate of the draw-head. The screws 8 at the outer ends of the transverse springs extend through the extensions or lugs 9 of the blocks 10, and are provided with nuts 32, which enable the springs to be readily adjusted.

It will be readily apparent that the car-coupling is simple, efficient, and inexpensive in construction, that it obviates the necessity of going between cars, and that it may be readily uncoupled. The links permit sufficient play to allow a train of great length to be readily started, and the partition 11 forms a stop for the pin. The car-coupling will enable curves to be readily and safely rounded and will permit coupling on them. The draw-head is provided at its front end with a coupling-pin perforation to permit the ordinary pin-and-link coupling to be employed. When it is desired to couple cars having draw-heads arranged at different elevations a crooked link may be employed. The jaws by being spring-actuated and capable of lateral spreading cause the car, in case the latter should be overturned, to uncouple automatically to prevent an overturned car carrying other cars with it down an embankment or the like.

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 this invention.

What I claim is—

1. In a car-coupling, the combination of a draw-head, pivoted jaws mounted in the draw-head and capable of lateral spreading, springs disposed transversely and connected with the rear ends of the jaws and provided with adjusting screws, substantially as described.

2. In a car-coupling, the combination of a draw-head, a car, pivoted jaws mounted in the draw-head, and transversely-disposed springs arranged at the rear end of the jaws and provided at their ends with screws, the screws at the inner ends of the springs being connected with the jaws and those at the outer ends of the springs being connected with the car, substantially as described.

3. In a car-coupling, the combination of a draw-head composed of upper and lower plates and having open sides, a transverse partition arranged between the sides and provided with lateral extensions, jaws pivoted between the sides and having recesses to receive the extensions, and springs connected with the jaws, substantially as described.

4. In a car-coupling, the combination of a draw-head, jaws pivoted in the draw-head, and spring-actuated bumpers arranged at the sides of the draw-head and provided at their inner sides with recesses to permit the spreading of the jaws, substantially as described.

5. In a car-coupling, the combination of a draw-head, jaws pivoted in the draw-head, and bumpers arranged at the sides of the draw-head and having their outer ends beveled to direct a link into the mouth of the draw-head, substantially as described.

6. In a car-coupling, the combination of a draw-head provided in its lower face with transverse recesses, pivoted jaws mounted in the draw-head, spring-actuated bumpers arranged at the sides of the draw-head and provided with elongated recesses, and rectangular clips extending across the bottoms of the draw-head and the bumpers and arranged in the recesses thereof and extending up the outer sides of the bumpers, substantially as described.

7. In a car-coupling, the combination of a car, a draw-head provided with spring-actuated jaws, a crank mounted on the draw-head and provided with arms interposed between the jaws, a vertical shaft mounted on the car and provided at its lower end with a crank, a rod connecting said cranks, a horizontal shaft, gearing connecting the shafts, a crank-handle arranged at the outer end of the horizontal shaft, and a swinging rack-bar mounted on the car and arranged to engage the crank-handle, substantially as and for the purpose set forth.

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

DANIEL WHITFIELD HAUSAM.

Witnesses:

ADOLPH J. LENGEL,

ERNEST OPITZ.