

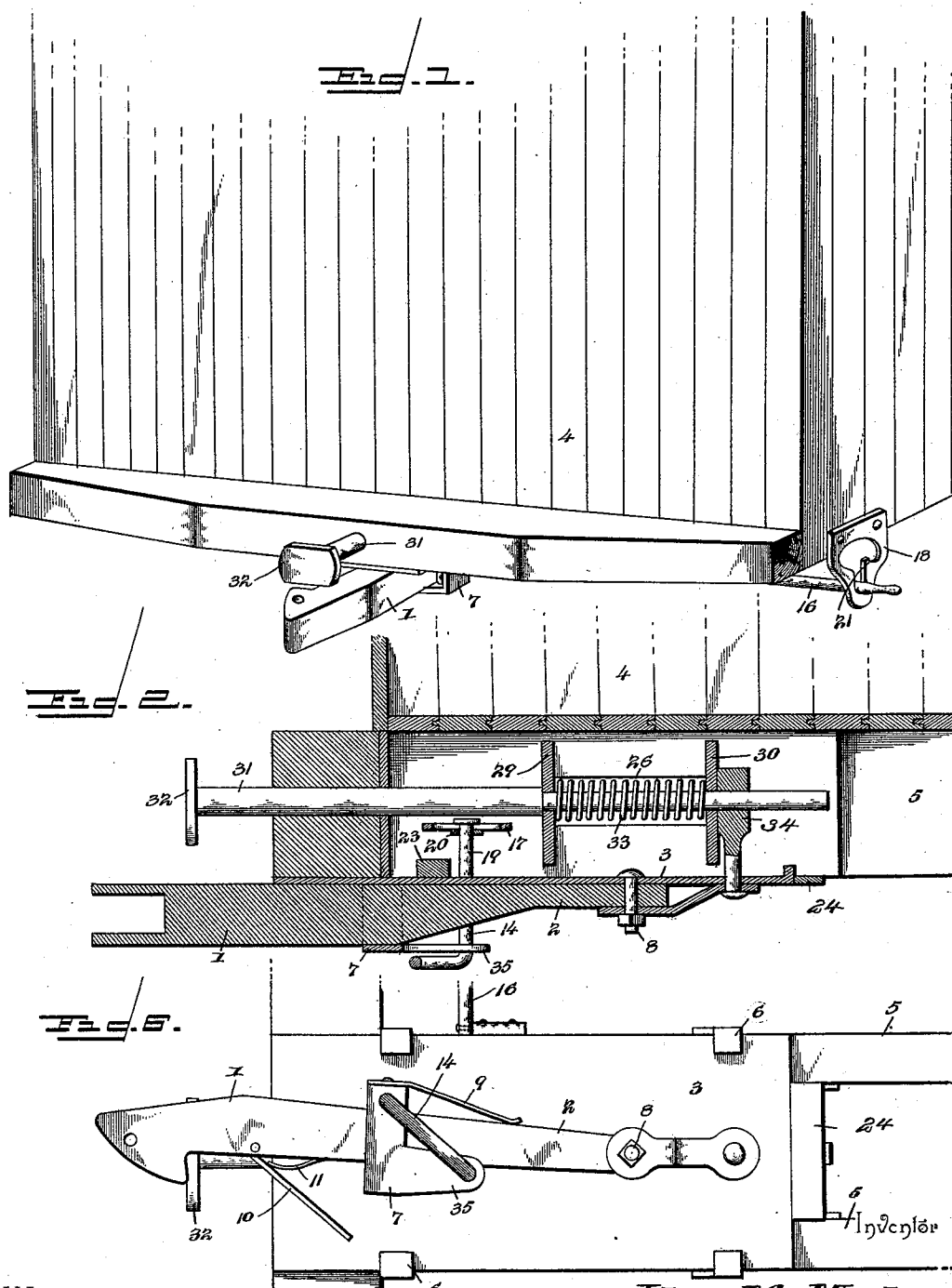
(No Model.)

2 Sheets—Sheet 1.

J. N. MOEHN.
CAR COUPLING.

No. 536,537.

Patented Mar. 26, 1895.



Witnesses

E. H. Stewart
J. F. Riley

by his Attorneys.

John N. Moehn

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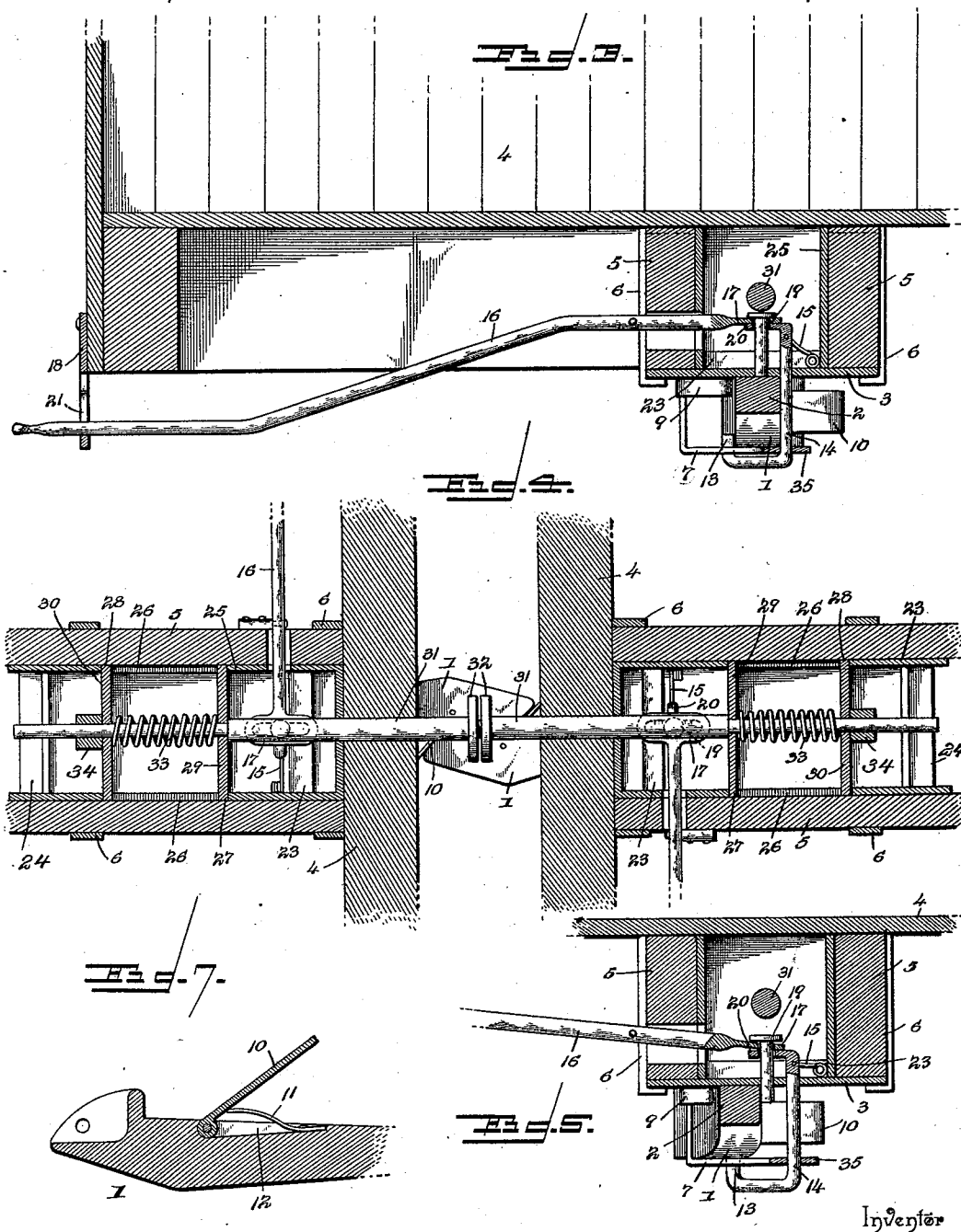
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Inventor

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Ca Snow & Co

UNITED STATES PATENT OFFICE.

JOHN N. MOEHN, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF THREE-FOURTHS TO ADOLF BOGUSLAWSKY, HERMAN KATZ, AND JACOB KATZ, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 536,537, dated March 26, 1895.

Application filed October 12, 1894. Serial No. 525,704. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. MOEHN, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, 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 inexpensive one, which will be capable of coupling automatically, and which may be readily uncoupled without going between cars.

A further object of the invention is to provide a simple and efficient bumper having a cushioning spring, adapted to operate as the cushioning spring of the draw-head.

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 central longitudinal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is a horizontal sectional view showing two cars coupled. Fig. 5 is a transverse sectional view, illustrating the position of the parts when the draw-head is uncoupled. Fig. 6 is a reverse plan view. Fig. 7 is a detail sectional view illustrating the construction of the draw-head and its yielding wedge.

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

1 designates a draw-head, beveled at one side, and provided with a shoulder, and having a link receiving recess at its outer end, and a coupling pin perforation, to permit it to be readily coupled with cars having the ordinary pin and link car coupling. The draw-head is pivoted at the inner end of its shank 2 to a plate 3, which is slidingly mounted on the frame of a car 4, the latter being preferably provided on its draw-timbers 5 with metal straps 6, having projecting tongues, forming

ways for the plate 3; but the ways in which the plate 3 slides, may be of any other desired construction.

The plate 3 is adapted to slide longitudinally of the car, and it is provided near its front end with a depending keeper 7, receiving the draw-head and limiting the lateral swing thereof on its pivot 8; and the draw-head is held normally at one side of the keeper by means of a spring 9, which forces the draw-head inward, for holding it in engagement with the draw-head of a corresponding coupling. In the accompanying drawings, the spring is shown flat, with one end secured to the keeper, and its other end engaging the shank of the draw-head; but a spiral spring may be employed for this purpose.

On one side of the draw-head, in rear of the beveled portion and shoulder, is mounted a resilient plate 10, hinged at its front end to the draw-head, in a recess thereof, and extending rearward and outward at an angle to the drawhead, and adapted to engage a corresponding draw-head for the purpose of separating two draw-heads for uncoupling. The hinged angularly disposed plate 10 forms a yielding wedge, and is engaged at its rear face by a spring 11, located in the recess 12 of the shank of the draw-head.

When the draw-head is coupled, or in position for coupling, its lateral movement is limited by a lug or stop 13 extending through a perforation of the bottom of the keeper 7, and preferably formed integral with an L-shaped arm or shank 14, which extends beneath the draw-head, and passes upward at the opposite side thereof, through a perforation of the sliding plate. The L-shaped arm or shank 14 is connected with a spring 15, which is mounted on the upper face of the sliding plate, and is adapted to throw the stop 13 upward automatically, when the stop is free to move, and the draw-head is not over the perforation for the same. The stop is lowered or depressed, to permit the draw-head to swing horizontally outward, by means of an operating lever 16, extending to one side of the car, and provided at its inner end with a loop or opening 17, and adapted to engage the L-shaped arm or shank 14. The

operating lever has its outer end arranged in a keeper 18, and its inner end receives a pin 19, which is arranged in a perforation of the sliding plate 3, and which, when the inner end of the operating lever is depressed, by raising the outer end thereof, is adapted to fall, when the draw-head is swung outward, to engage the inner side of the draw-head to lock the draw-head in its uncoupled position.

The upper terminal of the L-shaped shank 14 is provided above the sliding plate 3 with an arm 20, having a perforation receiving the pin 19, and engaged by the loop or plate 17 of the operating lever.

The operating lever is fulcrumed on one of the draw-timbers and passes through a slot or opening thereof; and the keeper 18 at the outer end of the lever is provided with a vertical slot or opening, to permit the outer end of the operating lever to be depressed, and it has an upper horizontal slot forming a shoulder 21, forming a support for holding the outer end of the operating lever elevated. This plate or keeper 18 may be located at the inner face of the side timber of the car, instead of at the extreme outer edge of the car, if desired.

When it is desired to uncouple the cars, the outer end of one of the operating levers is elevated, and engaged with the shoulder 21. This lowers the stop 13, and depresses it below the upper face of the bottom of the keeper, and when the cars are moved together, the yielding wedges of the draw-heads separate the latter, and the pin 19, which is free to fall, will drop as soon as its draw-head is swung laterally from beneath the pin 19, which will hold the draw-head outward and prevent the same from coupling, until the outer end of the operating lever is lowered.

The loop or opening 17 of the operating lever permits the pin 19 to move backward and forward with the sliding plate, and the latter is provided on its upper face with an integral stop 23, disposed transversely of it, and located between the draw-timbers 5, and arranged at the front of the sliding plate to engage the end beam of the frame of the car, to limit the outward movement of the sliding plate to take the strain from the pin 19. The inward movement of the sliding plate is limited by a transverse piece 24 of a rectangular frame 25, located between the draw-timbers 5, and bolted or otherwise secured to the same.

The rectangular frame is provided at opposite sides with longitudinal slots 26, forming ways for projections or lugs 27 and 28 of transverse plates 29 and 30. A bumper rod 31 is mounted on the frame of the car and projects outward therefrom, and carries at its outer terminal a suitable head 32; and it extends through perforations of the plates 29 and 30, and has disposed on it a spiral spring 33, which is interposed between the plates 29 and 30. The plates 29 and 30 normally lie at the ends of the slots of the rectangular frame, being held in that position by the spiral

spring. The front or outer plate 29 is secured to the bumper rod, and it is adapted to move rearward, and to compress the spiral spring when the bumper head moves inward. The other plate 30 loosely receives the bumper rod, and engages the frame at the rear terminals of the slots 26, when the bumper rod is moved inward to form a stop for the cushioning spring; and it is adapted to be engaged by a lug 34 of the sliding plate 3, whereby when the draw-heads are pulled outward, the spring 33 will form a cushion for the same, thereby enabling the said spring 33 to serve the double purpose of cushioning the bumper rod, and the draw-head. The lug 34 is provided with a perforation, and loosely receives the rear end of the bumper rod.

The keeper 7, which is disposed transversely of the sliding plate 3, is provided with a rearward extending guide arm 35, having a perforation, receiving the vertical portion of the L-shaped shank 14 of the depressible stop 13.

It will be seen that the car coupling is simple and comparatively inexpensive in construction, that it is positive and reliable in operation, and that it is capable of coupling automatically and of being readily uncoupled without going between cars. It will also be apparent that it will greatly facilitate the rapid making up of trains.

Any suitable means may be employed for enabling the operation of uncoupling to be performed from the top of a car, or from a platform.

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 car, a keeper depending therefrom, a draw-head pivoted at its rear end and provided at one side with a shoulder and adapted to engage a similar draw-head, a spring for holding the draw-head in such engagement, a depressible stop arranged at the bottom of the keeper for limiting the outward movement of the draw-head, a stop arranged at the inner side of the draw-head and arranged to lock it uncoupled, and means for operating the stops, substantially as described.

2. In a car coupling, the combination of a car, a horizontally swinging pivotally mounted draw-head, a spring for holding the draw-head in engagement with a corresponding draw-head, the inner and outer stops arranged to engage the draw-head to lock it against inward or outward movement, and means for operating the stops, whereby either one or the other will engage the draw-head, substantially as described.

3. In a car coupling, the combination of a car, a horizontally swinging pivotally mounted draw-head; a spring for holding the same coupled, a keeper receiving the draw-head, a

spring actuated stop mounted at the bottom of the keeper and arranged to lock the draw-head against outward movement, a pin located above the draw-head and arranged to engage the inner side of the draw-head to lock the latter in its uncoupled position, and means for simultaneously operating the stop and the pin, substantially as described.

4. In a car coupling, the combination of a car, a horizontally swinging draw-head, a keeper receiving the same, an L-shaped shank provided with a lug mounted on the keeper and arranged to engage the draw-head to limit the outward movement of the same, said shank extending across the bottom of the draw-head and vertically at the opposite side thereof, a pin mounted above the draw-head and arranged to engage the inner side thereof, a spring for holding the L-shaped shank normally in an elevated position, and an operating lever provided at its inner end with an opening receiving the pin, said operating lever also engaging the shank, and adapted to depress the same against the action of its spring, substantially as described.

5. In a car coupling, the combination of a car, a plate slidingly mounted thereon and provided with a depending transversely disposed keeper, a draw-head pivotally mounted on the plate and arranged to swing horizontally in the keeper, a pin mounted on the plate and arranged to engage the draw-head for holding it uncoupled, a stop for locking the draw-head against outward movement, and means for operating the stop and the pin, substantially as described.

6. In a car coupling, the combination of a horizontally swinging draw-head, having a shoulder at one side, and provided in rear of the same with a yielding plate, and the inner and outer stops arranged to engage alternately the draw-head, substantially as described.

7. In a car coupling, the combination of a horizontally swinging draw-head, having a shoulder at one side, a laterally extending plate arranged at an angle to the draw-head, and having its front end hingedly connected therewith, and a spring interposed between the plate and the draw-head, whereby a yielding wedge is formed, substantially as described.

8. In a car coupling, the combination of a car, a plate slidingly mounted thereon, a draw-head connected with the plate, a bumper rod disposed longitudinally of the car, the front and rear transversely disposed plates 29 and 30, mounted in suitable ways of the car, the front plate 29 being connected with the bumper rod, a spiral spring disposed on the bumper rod and interposed between the plates, and a lug carried by the sliding plate and arranged to engage the transverse plate 30, 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.

JOHN N. MOEHN.

Witnesses:

JOHN H. SIGGERS,
E. G. SIGGERS.