

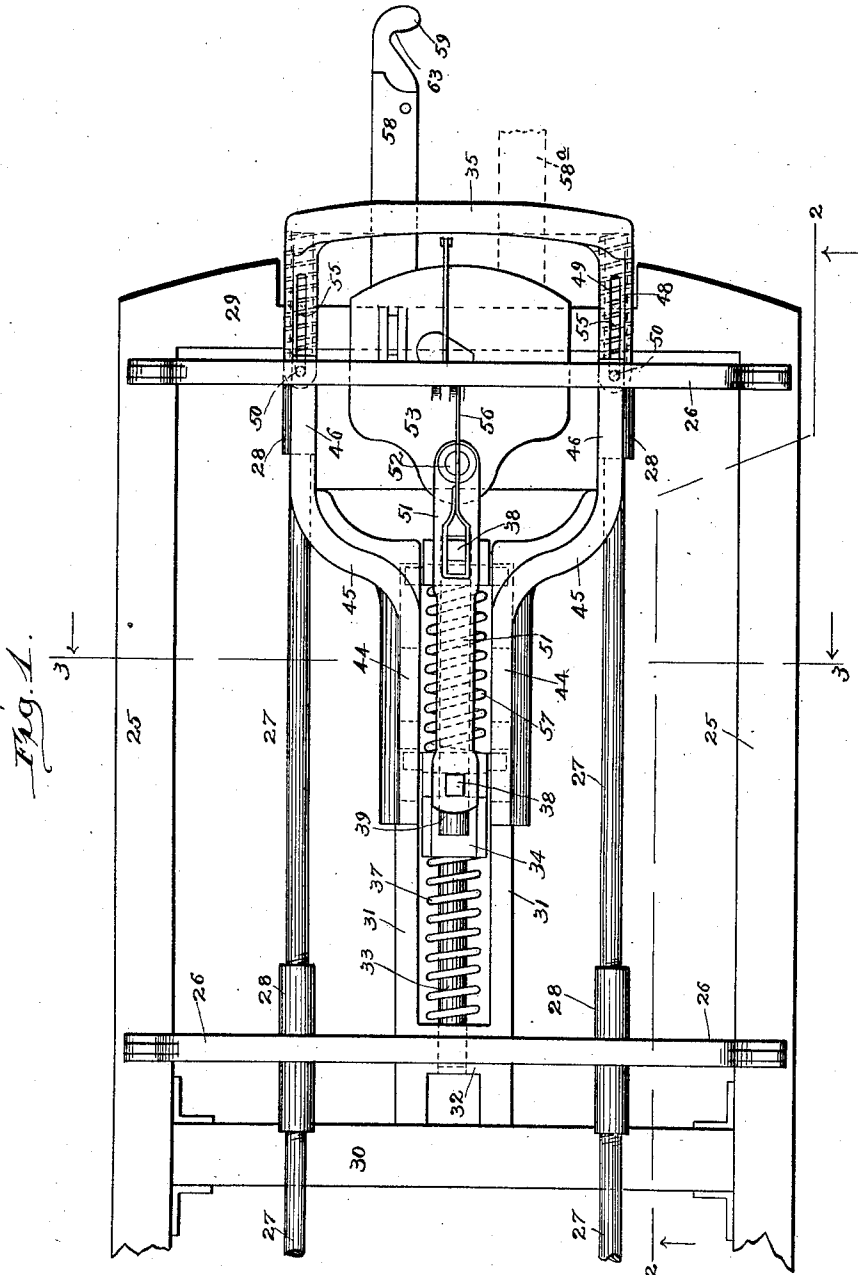
J. C. F. SELL.
CAR COUPLING.

APPLICATION FILED MAR. 26, 1910.

1,057,177.

Patented Mar. 25, 1913.

2 SHEETS—SHEET 1.



Witnesses:

Chas. E. Gorton.

J. E. Hansen.

Inventor:

John C. F. Sell

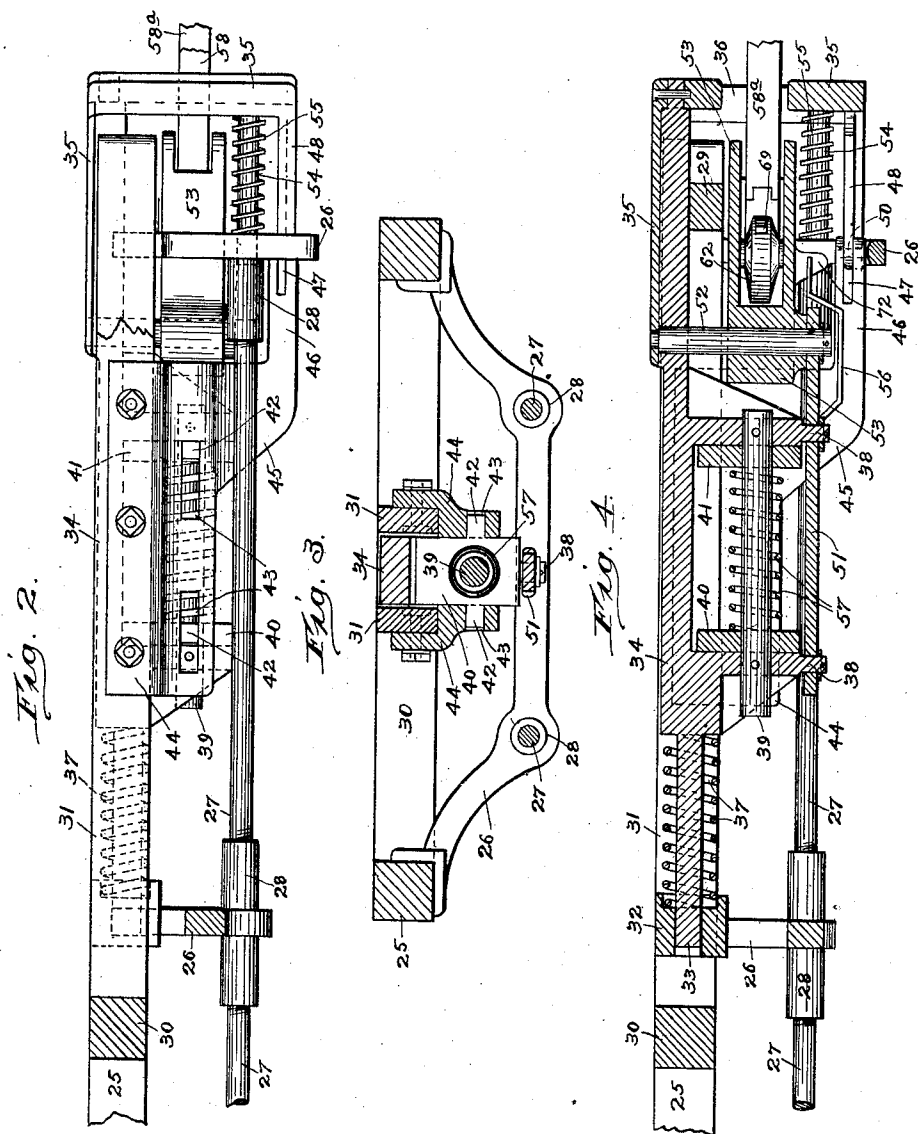
By *Chas. C. Pithman*
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2 SHEETS—SHEET 2.



Witnesses:
Chas. E. Gorton.
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UNITED STATES PATENT OFFICE.

JOHN C. F. SELL, OF CHICAGO, ILLINOIS.

CAR-COUPLING.

1,057,177.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed March 26, 1910. Serial No. 551,621.

To all whom it may concern:

Be it known that I, JOHN C. F. SELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

This invention relates to improvements in means for automatically coupling cars and for preventing them telescoping one with another, and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a combined automatic coupling and anti-telescoping structure for cars, which shall be simple and inexpensive in construction, strong, durable, and efficient in operation, and so made as to reduce to a minimum the jolting or jars incident to bumping together of the cars.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1, is a bottom plan view of a portion of a car-frame, showing it equipped at one of its ends with a mechanism embodying the invention; Fig. 2, is a longitudinal view partly in section and partly in elevation taken on line 2—2 of Fig. 1, looking in the direction indicated by the arrows; Fig. 3, is a cross sectional view taken on line 3—3 of Fig. 1, looking in the direction indicated by the arrows; and Fig. 4, is a central longitudinal view of the mechanism and a portion of the frame of a car.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawings.

The reference numeral 25, designates the car-frame, which may be of the ordinary or any preferred construction, and on which the trucks and super-structure of the car may be mounted in the ordinary or any well known manner. Each end of the car-frame is equipped with one of my coupling and anti-telescoping apparatus, but as they are of the same construction, and operation, I have shown only one of said devices. Se-

cured transversely to the side rails of the frame, are a number of braces 26, which depend below the frame and are for the support of longitudinally extended strengthening rods 27, the ends of which are preferably screw-threaded and engage sleeves 28, located in suitable openings in said braces. The braces 26, near the ends of the car-frame depend somewhat lower than the intervening braces and assist in supporting the draw-head of the coupler. As I have shown one end only of the car-frame and one coupler only, reference will be had to only one pair of the braces near the ends of the cars. The sleeves 28, located in said braces extend inwardly and longitudinally from the same, while the sleeves 28, in the intervening braces extend on each side thereof, or entirely through the same. Connecting the transverse portion 29, at one end of the car-frame with a transverse bar or beam 30, located between its ends, is a pair of parallel sills 31, which are united near their inner ends with an apertured transverse portion 32, to receive one end of the rod 33, which is connected at its other end with the extension 34, of the draw-head 35, which is hollow and provided in its outer end with an opening 36, for the reception and operation of the draw-bars. Located around the rod 33, is a spring 37, which rests at one of its ends against the transverse portion 32, and at its other end against the extension 34, of the draw-head. The extension 34, has on its lower portion downwardly extended projections 38, each provided with an opening in which is located and secured a rod 39, which extends longitudinally of the frame. Located on the rod 39, on the inner surface of the inner projection 38, is a plate 40, and located on said rod on the inner surface of the outer projection 38, is another plate 41, each of which has on each of its sides a lateral projection 42, to operate in guideways 43, formed in the depending portions of the side pieces 44, which are secured to the outer surface of the sills or members 31, and have their ends adjacent to the end of the car-frame, outwardly curved as at 45, then extended outwardly as at 46, beyond the brace 26, at the end of said frame on the lower portion of which brace they may rest.

The outer portion of each of the extensions 46, of the side pieces 44, is provided with a slot 47, to receive inwardly and hori-

zontally extended arms 48, on the lower portion of the draw-head 35, each of which arms is provided with a slot 49, to receive a guide pin 50, which pins are vertically disposed on the outer portions of the extensions 46. The projections 38, on the extension 34, are connected together at their lower ends by means of a bar 51, which extends longitudinally and into the lower portion of the draw-head 35, and supports at its outer portion an upright pin 52, the upper portion of which is extended through suitable openings in the extension 34, and upper portion of the draw-head.

Pivotaly mounted at its rear portion on the pin 52, is a coupler-head 53, which is hollow and lies horizontally within the draw-head 36, so that its front and open end will register with the opening 36, in the draw head. Extended inwardly from the front lower portion of the draw-head 35, and on each side of the opening 36, therein, is a rod 54, the inner end of each of which is adapted to fit within the outer end of each of the sleeves 28, on the outer brace 26, which sleeves connect the rods 27, at their outer ends to said brace, yet in such a way as to permit of the entrance of the rods 54, into said sleeves when the draw-head is depressed. Surrounding each of the rods 54, is a spring 55, one end of each of which rests against the said brace 26, and the other end against the inner surface of the outer portion of the draw-head. Secured at one of its ends to the outer projection 38, on the extension 34, is a spring 56, which has its other end connected to the lower portion of the coupler-head 53, outwardly from its pivot 52, and is employed for the purpose of normally holding the sides of the coupler-head in alinement with the side walls of the draw-head, yet so as to permit of the pivotal movement of the coupler-head. Surrounding the rod 39, is a spring 57, which rests at its ends against the plates 40, and 41, and is employed to afford additional cushioning or yielding means for the draw-head and coupler-head.

From the foregoing and by reference to the drawings, it will be readily understood and clearly seen that an apparatus constructed according to my invention is of an extremely simple and inexpensive nature and is especially well adapted for use by reason of the certainty and automatic character of its operation, and of the fact that in cases of collisions or sudden starting or stopping of the cars, the yielding draw-heads and coupler-heads, as well as the reinforcing or strengthening means of the car-frame will prevent telescoping and will also reduce to a minimum the jars and jolts of the train of cars, and it will also be evident from the above description of my improvements, that the apparatus is susceptible of

considerable modification without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise form and arrangement of the several parts of the device as herein set forth, in carrying out my invention in practice.

Having thus fully described my invention what I claim as new and desire to secure by Letters-Patent is—

1. In a mechanism of the class described, the combination with a car-frame, of longitudinally extended strengthening rods mounted thereon and each having at its outer end a socketed support, a draw-head yieldingly supported on the frame for longitudinal movement thereon, inwardly extended rods on the lower portion of the draw-head adapted to operate in the socketed supports of the strengthening rods, and a spring surrounding each of the rods on the draw-head and interposed between the same and the socketed supports.

2. In a mechanism of the class described, the combination with a car frame having longitudinally disposed sills extending from one of its ends inwardly, of longitudinally extended strengthening rods mounted on the frame below said sills and each having at its outer end a socketed support, a draw-head yieldingly mounted on the frame for longitudinal movement thereon and having an inward extension provided with a rod at its inner end, said extension and rod located between said sills, a spring surrounding said rod and adapted to cushion the draw-head and its extension, inwardly extended rods on the lower portion of the draw-head adapted to operate in the socketed supports of the strengthening rods, and a spring surrounding each of the rods on the draw-head and interposed between the same and the socketed supports.

3. In a mechanism of the class described, the combination with a car-frame having spaced apart longitudinal sills extended from the end of the frame inwardly, of a hollow draw-head having an extension located between said sills and provided at its inner end with a rod movably supported at one of its ends, a spring surrounding said rod and adapted to cushion the draw-head and its extension, a pair of downward projections on the extension of the draw-head, a rod extended through said projections, a depending side piece secured to each of the said sills and each having longitudinally disposed guideways, a plate located on the rod at the inner surface of each of the projections on the draw-head extension, each of said plates having lateral projections extended into the guideways of said side pieces, a spring surrounding the rod on said projections and resting at its ends against

the plates thereon, a longitudinally extended bar connected to said projections and carrying on its outer portion a pivot pin, a hollow coupler-head mounted on said pin, and coupling means carried by the coupler-head.

4. In a mechanism of the class described, the combination with a car-frame, of a hollow draw-head having an inwardly extended spring-actuated extension provided with a pair of spaced apart downward projections, a rod uniting said projections, a depending side piece secured on the frame on each side of said rod and each having a longitudinal guideway, a plate located on the rod at the inner surface of one of the pro-

jections on the draw-head extension, said plate having lateral projections extended into the guideways of said side pieces, a spring surrounding the rod on said projections and resting at one of its ends against one of said projections and at its other end against said plate, a longitudinally extended bar connected to said projections and carrying on its outer portion a pivot pin, a hollow coupler-head mounted on said pin, and coupling means carried by the coupler-head.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."