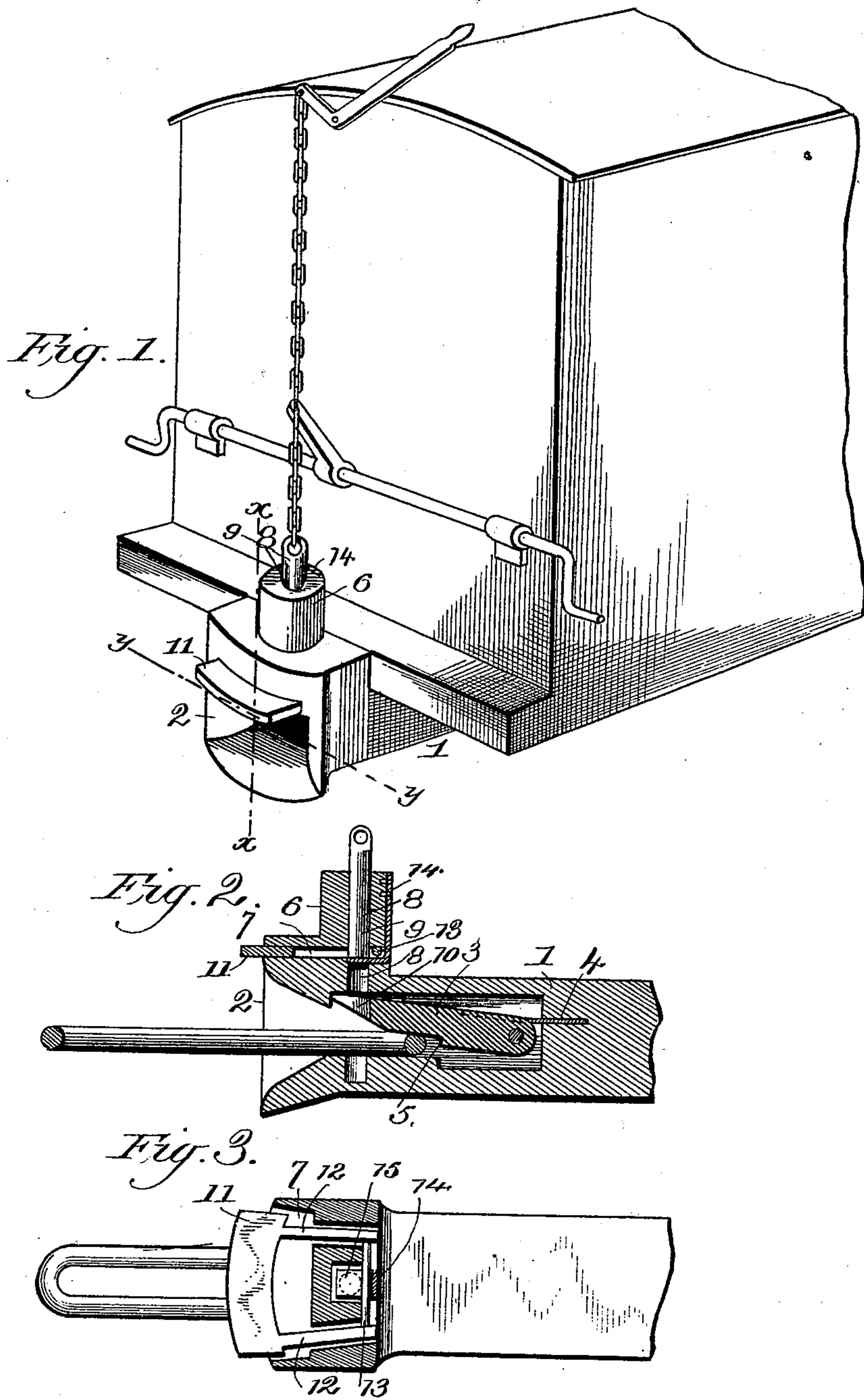


(No Model.)

J. A. WARD.
CAR COUPLING.

No. 516,619.

Patented Mar. 13, 1894.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES A. WARD, OF MURRAY, IDAHO, ASSIGNOR OF ONE-HALF TO BARRY N. HILLARD AND PHILIP WIESNER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 516,619, dated March 13, 1894.

Application filed November 28, 1893. Serial No. 492,265. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. WARD, a citizen of the United States, residing at Murray, in the county of Shoshone and State of Idaho, have invented certain new and useful Improvements in Automatic Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in automatic car couplings, and has for its object to provide and construct a durable, economic and automatic coupler, as nearly like the ordinary hand coupler as is possible to make the same, and in order to accomplish an automatic operation in connecting two cars securely together by impact, thereby avoiding the necessity of going between the cars to couple or uncouple the same. The improved construction is also so arranged that it will couple with the ordinary hand link coupler automatically.

With these and other objects in view, the invention consists of the construction and arrangement of the several parts which will be more fully hereinafter described and claimed.

In the drawings: Figure 1 is a perspective view of an end of a car showing the improved coupler applied thereto. Fig. 2 is a section on the line $x-x$ Fig. 1. Fig. 3 is a horizontal section on the line $y-y$, Fig. 2.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

Referring to the drawings, the numeral 1 designates a solid draw-head, with a bell-shaped mouth 2, which communicates with an interior opening having walls adapted to receive the working parts of the device. A dog 3 is mounted in the draw-head 1 and has a spring 4 connected to the rear thereof to hold the same down, and retain the link in a horizontal plane. The said dog is formed with a shoulder 5 to prevent the link from pushing back too far and to properly position said link in such manner as to permit the pin to pass therethrough readily and easily to produce a coupling, but at the same time it has sufficient longitudinal vertical and lateral movements to accommodate itself to the po-

sition of the draw-head to which it is coupled. On the upper front portion of the draw-head is a vertical extension 6 having a horizontal slot 7 extending therethrough, which is centrally divided to form guides and vertically projecting through the said extension is a pin opening 8 which aligns with the similar opening in the draw-head and is adapted to receive the pin 9. The front end of the dog 3 is formed with a curved or similar slot 10 through which the pin passes and is also beveled on opposite sides of said slot to permit the link to pass under the said dog as will be readily seen from the drawings. In the horizontal slot 7 of the extension 6 is a rest plate 11 having rearwardly extending arms 12 which are connected at the back by a cross bar 13, the latter being engaged by a spring 14, attached to the rear of said extension 6, and acting to normally throw the said rest plate forward and to have a rear central projection 15 to cover the pin opening in the said extension at the base of the same, it being understood that said extension may be the lower horizontally bent end of the spring 14.

In operation, the approaching draw head strikes the outer projecting portion of the plate 11, and forces the same rearwardly to clear the pin openings and permit the pin to drop down and engage the link.

In order to uncouple without going between the cars any suitable means may be used. A chain is attached to the upper end of the coupling pin and extends to top of car to a lever for uncoupling from the top, and a rod is placed on the end of car at a suitable height from the ground, placed in journals with the rod projecting past each side of car and a crank bent thereon and a hook is placed in center of rod and attached to the chain. By turning the crank, the coupling pin is raised and the cars are uncoupled, thereby avoiding the necessity of going between to uncouple.

In order to couple automatically, in connecting to a hand coupler, the link must be in the improved coupler head and the coupling pin in the hand coupler must be set as is the custom now. When the two draw heads come together, the link enters the hand coupler draw head without being held up by hand and the pin is caused to drop by the jar and

secures the link. When two cars are to be linked together, both containing the improved draw head, it is not necessary to go between to prepare for a coupling, unless the two draw heads each have a link or should both happen to be empty, then a link must be placed in the draw head or one taken out, as the case may be. The jaw 3, for holding the link in a horizontal position is placed in its position by slipping it through the mouth of the draw head, and it is then secured by bolt going through the draw head, and allows the jaw to work up and down. The plate 11 is placed in position from the front; the two arms are slipped in through the guide grooves or slots until they come out at the back and then the rear cross bar 13 is connected to them; then spring 14 is placed back of the bolt, and projection 15 goes in under bar 13 and is in position to hold the coupling pin in an elevated position and drops it at the proper moment; the projection also presses against the coupling pin after the coupling is made, and prevents the pin from working upward or coming out of its own accord.

The front end of the draw head is round-

ing, as is also the front edge of the sliding rest plate. The object in this is to make a perfect coupling on curves.

Many other changes might be made and substituted for those shown and described, without in the least departing from the nature or spirit of the invention.

Having thus described the invention, what is claimed as new is—

In an automatic car coupling, the combination of a draw head, and a loose lug or dog, adapted for holding the coupling link in a horizontal position, a spring projection adapted to hold the coupling pin in an elevated position, and a sliding rest plate adapted to push the spring projection backward, thereby dropping the coupling pin automatically at the desired moment, all arranged, substantially as and for the purposes specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES A. WARD.

Witnesses:

L. A. DOHERTY,
S. W. SEARS, Jr.