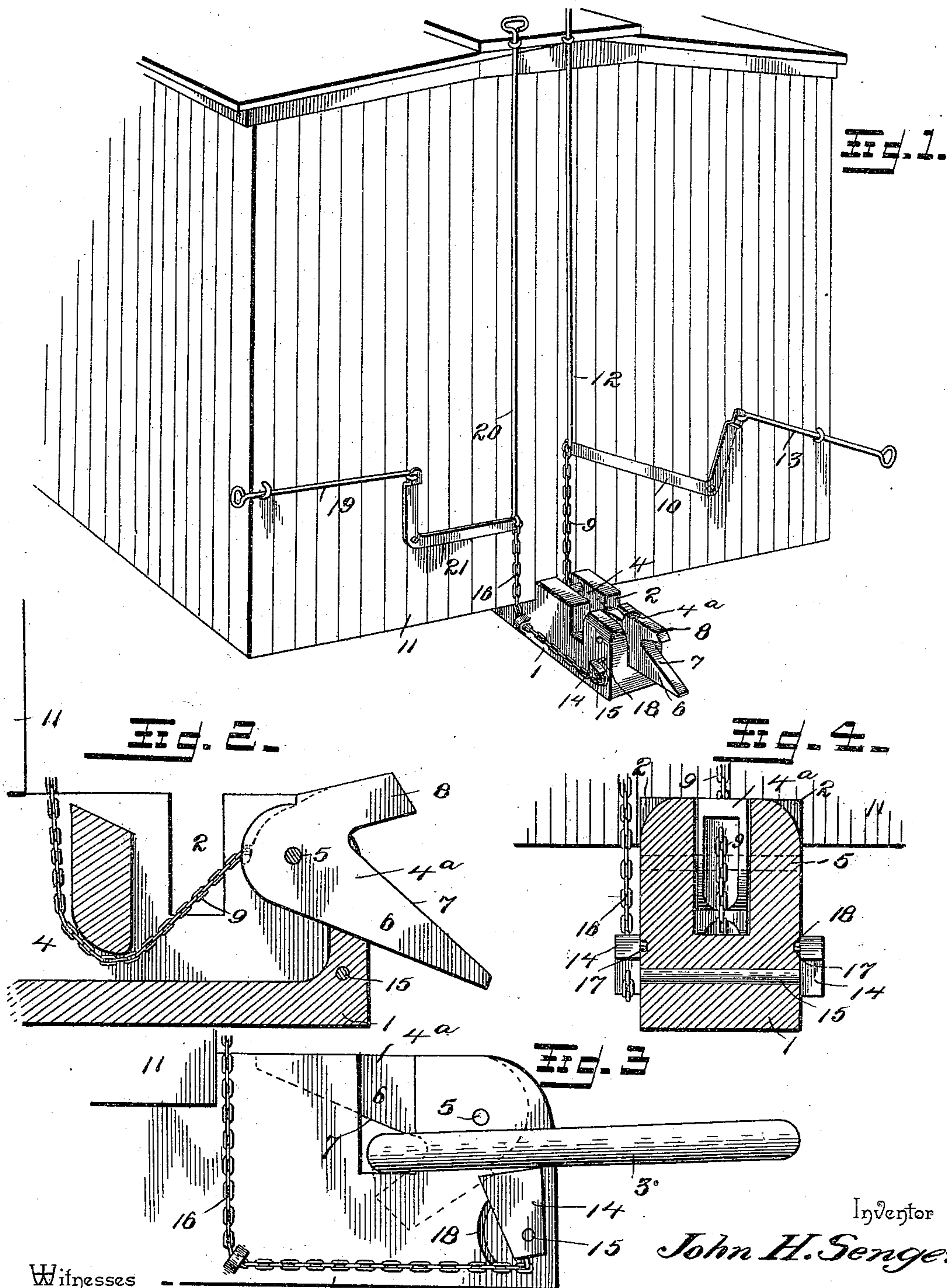


(No Model.)

J. H. SENGER.
CAR COUPLING.

No. 551,693.

Patented Dec. 17, 1895.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN H. SENGER, OF CERRO GORDO, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 551,693, dated December 17, 1895.

Application filed August 28, 1895. Serial No. 560,812. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SENGER, a citizen of the United States, residing at Cerro Gordo, in the county of Piatt and State of Illinois, 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 capable of coupling automatically, and adapted to guide a link into the draw-head which receives it to avoid going between cars.

A further object of the invention is to enable the car-coupling to be uncoupled from the top and sides of a car, and to effect such uncoupling when a car is in motion to make what is known as a "flying switch."

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, the parts being arranged to receive and guide a wing into engagement with the draw-head. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a side elevation illustrating the manner of supporting a link. Fig. 4 is a transverse sectional view of the same.

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

1 designates a draw-head, having near its front or outer end a transverse opening 2 to receive and engage a link 3, and provided with a longitudinal recess 4, in which is pivotally mounted a link guide and carrier 4^a. The link guide or carrier is mounted on a transverse pivot 5 near the end of the draw-head, and consists of a substantially triangular portion 6, having a rounded butt or base 7, and adapted when thrown forward, as illustrated in Fig. 1 of the accompanying drawings, to project beyond the draw-head and provide an inclined face or way, up which the link is adapted to ride. At the upper extremity of the inclined face 7 is arranged an arm 8, pro-

jecting forward from the link guide and carrier, when the latter is in operative position, and adapted to have the link abut against it, whereby the link causes the guide and carrier to swing rearward and to conduct it into the link-receiving opening 2. When the link is in engagement with the draw-head, as illustrated in Fig. 3 of the accompanying drawings, it pulls against the draw-head at the front side of the opening 2, and the guide and carrier 4^a does not receive any of the strain incident to drawing a train of cars.

The operation of uncoupling is performed by swinging the link guide and carrier forward from the position illustrated in Fig. 3 of the accompanying drawings to that shown in Fig. 1, which movement carries the link out of the opening 2 and conveys it clear of the draw-head. This swinging movement of the link guide and carrier may be accomplished by any suitable mechanism, and, as illustrated in the accompanying drawings, a chain 9 is preferably attached to the butt or base of the link guide and carrier and is arranged on the rounded edge of the same, the link guide and carrier being grooved at that part for the reception of the chain. The chain then extends inward or rearward in the recess 4, and passes upward through an opening in the top of the draw-head, and is connected with the operating mechanism consisting preferably of a bell-crank lever 10, fulcrumed on the car 11 and having handle-rods 12 and 13, connected to its inner and outer ends. The rod 12, which is connected to the inner end of the bell-crank lever, extends to the top of the car and it is disposed substantially vertically, and the other rod 13 is arranged horizontally and extends to one side of the car. This construction enables the operation of uncoupling to be performed from the top and sides of the car, or any other desired uncoupling mechanism may be employed.

The link 3 is maintained in substantially a horizontal position preparatory to automatic coupling by a link-support 14, comprising a pair of supporting-blocks, located at the sides of the draw-head in advance of the opening 3, and pivoted to the draw-head by a transverse pin 15. The blocks of the link-support are tapering or substantially triangular, being in-

verted and extending upward from the transverse pin, and an operating-chain 16 is connected beyond the pin 15 with the smaller end of one of the blocks, and is adapted to swing the larger end upward and forward beneath the link. When the link-support is not in use the blocks lie in substantially a horizontal position, extending inward from the transverse pin 15, and their upward swing is limited by a fastening device 17, projecting inward from the inner face of each block and arranged in a curved groove 18. The groove prevents the blocks from swinging upward and assuming a horizontal position, whereby when the link is lifted from the blocks the support will swing backward to its initial position.

The link-support is operated from the top and sides of a car by means of rods 19 and 20, connected with the ends of a bell-crank lever 21, which is fulcrumed at its angle on the car and which has its inner end attached to the operating-chain 16, suitable guides being provided for the latter, which extends along the draw-head and upward on the same.

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 receiving and guiding a link into engagement with it. It will also be apparent that it may be readily uncoupled from the top and sides of a car, and that the operation of uncoupling may be performed when cars are in motion, to make what is known as a "flying switch."

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 provided with a transverse link receiving opening, and a link guide and carrier fulcrumed on the draw-head in advance of the opening, and having an inclined edge to receive and guide a link, and provided at the inner extremity thereof with an arm adapted to be engaged by the link, substantially as and for the purpose described.

2. In a car coupling, the combination of a draw-head having a transverse link receiving opening, a link guide and carrier fulcrumed on the draw-head, and consisting of a substantially triangular portion having a rounded base, and an arm projecting from the base and adapted to be engaged by a link, and operating mechanism having a chain arranged on the rounded portion or base of the link guide and carrier, substantially as described.

3. In a car coupling, the combination of a draw-head provided with a transverse link-receiving opening and having at opposite sides curved grooves 18, a link, a transverse pin passing through the draw-head, a pair of blocks located at opposite sides of the draw-head and mounted on the ends of said pin and adapted to be swung upward beneath the link, projections arranged at the inner faces of the blocks and extending into the grooves 18 and limiting the swing of the blocks, whereby the latter are caused to fall automatically, and means for swinging the blocks upward, 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 H. SENGER.

Witnesses:

DANIEL S. HOFFERT,
W. A. FLECK.