(No Model.)

C. H. SNYDER.

CAR COUPLING.

No. 510,719. Patented Dec. 12, 1893.

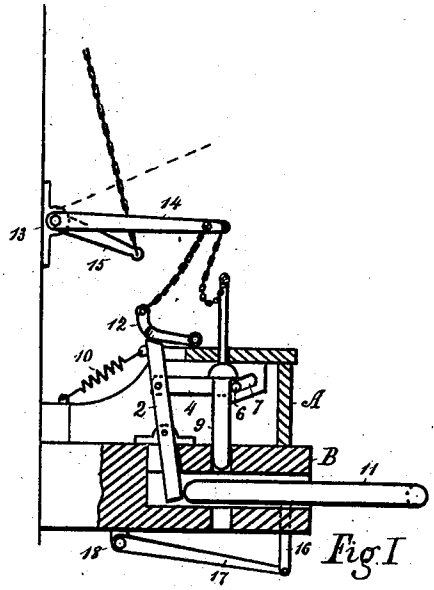

Fig. I.

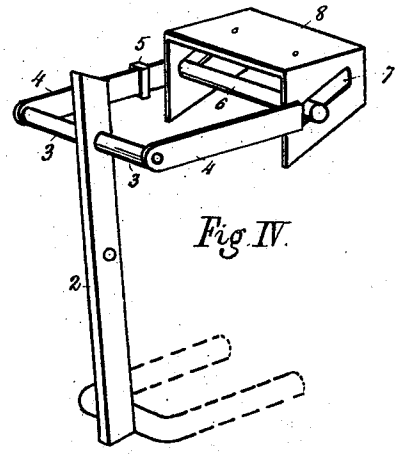

Fig. IV.

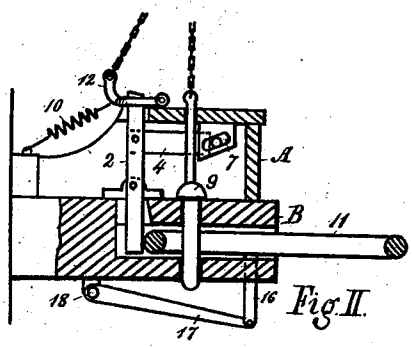

Fig. II.

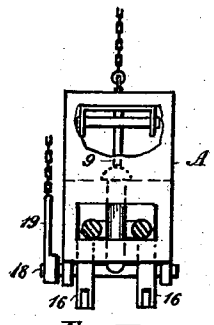

Fig. V.

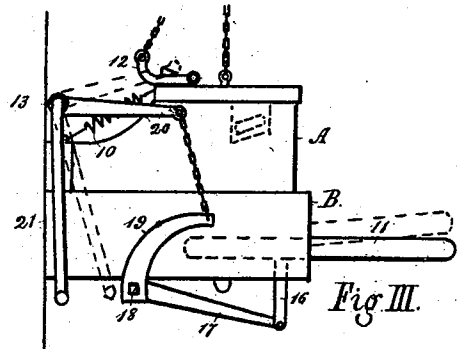

Fig. III.

Witnesses.
R. S. Miller
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Inventor.
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By J. Riley Atty

THE NATIONAL LITHOGRAPHING COMPANY,
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UNITED STATES PATENT OFFICE.

CHARLES H. SNYDER, OF PERCIVAL, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 510,719, dated December 12, 1893.

Application filed June 9, 1893. Serial No. 477,089. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. SNYDER, a citizen of the United States, residing at Percival, in the county of Fremont and State of Iowa, have invented a new and useful Improvement in Car-Couplings, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure I is a vertical longitudinal section of my improved coupling, showing the initial position of the parts in readiness for the coupling process; Fig. II, the same view showing the parts in engagement; Fig. III, a side view; Fig. IV, a perspective detail of the trip mechanism, and Fig. V, a front view of the drawhead partly broken away.

My invention relates to certain improvements in automatic car-coupling apparatus and its object is to provide a device whereby the coupling pin may be supported when out of engagement with the link, and when desired may be automatically brought into engagement therewith by appropriate and reliable trip mechanism. Further improvements provide adequate means for controlling the horizontal position of the free end of the link enabling it to enter opposite drawheads of different altitudes, together with suitable appliances for releasing the pin and adjusting the link without endangering the lives of trainmen or other operatives.

In the accompanying drawings, A designates a box or casing which is attached to the top of the drawhead B, the chamber of which has a vertical extension or slot in the rear, to admit a reciprocating trip lever 2 provided near its upper end with transverse arms 3 whose extremities are pivotally attached to push bars 4 which move in guides 5. The free ends of these bars engage the projecting ends of a transverse bar 6 which has free lateral movement in the inclined slots 7 formed in flanges depending from a plate 8 attached to the under side of the lid of the casing. This bar normally gravitates to the lower ends of the slots but when engaged by the push bars readily yields and allows the tapering body of the coupling pin 9 to move upwardly, until the shoulder of the pin passes. The bar being thus released, rolls back under the shoulder and holds the pin out of the drawhead. The trip lever is normally held back by a spring 10 causing its lower end to project forwardly in the drawhead while the push bars above are withdrawn from contact with the transverse bar which upholds the coupling pin. When the link 11 enters the drawhead and strikes the lower end of the trip lever, the push bars release the transverse bar 6 from its engagement with the coupling pin which then drops into the link.

An open link or hook 12 is pivoted on the casing and when the trip lever is drawn forward, the link rides over and drops in the rear of the lever which is thus securely locked. The uncoupling process will be readily understood. A shaft 13, provided on each end with a crank handle, is journaled on the end of the car and carries a lever 14 provided on its outer end with two chains, the shorter one of which is attached to the link 12 and the longer one to the top of the coupling pin. When the lever is raised the trip lever is first released, the coupling pin is drawn out and upheld by the bar 6 and the coupling link is ejected. A second lever 15 is attached to the shaft and connected by a chain to a ring or handle which may be conveniently reached from the top of the car.

Two vertical apertures are formed in the lower shell and near the front of the drawhead to admit the bars 16, the upper ends of which bear against the coupling link. Their lower ends are pivotally attached to levers 17 attached to a shaft 18 operated by a curved arm 19 connected by a chain to a lever 20 and crank 21. By this means, the projecting end of the coupling link may be adjusted and held in the position to enter the drawhead of an approaching car.

What I claim as new is—

1. In an automatic car-coupling device, the combination with a railway car of the herein described drawhead having a vertical slot communicating with the rear of the chamber, a reciprocating trip-lever adapted to swing in said slot and provided on its upper end with transverse arms pivotally attached to bars 4; the transverse bar 6 having free lat-

eral movement in inclined slots 7 and adapted to engage and uphold the coupling pin, and means as described for releasing the coupling-pin, substantially as herein set forth.

2. In an automatic car-coupling device, the combination with the drawhead, the reciprocating trip-lever and its adjuncts of the herein described vertical bar 16 the levers 17 and mechanism connected therewith adapted to adjust and hold the link in coupling position, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 20th day of May, 1893, in the presence of witnesses.

CHARLES H. SNYDER.

Witnesses:
HENRY DAILY,
E. R. HAWLEY.