

(No Model.)

W. V. WRAY.
CAR COUPLING.

No. 433,385.

Patented July 29, 1890.

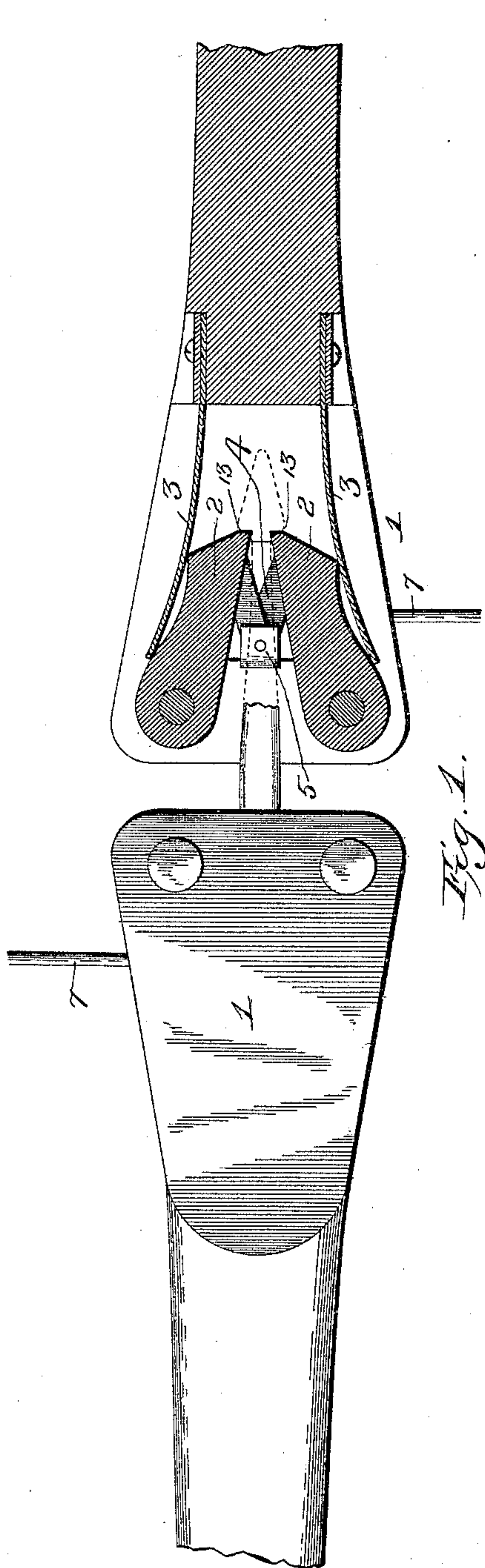


Fig. 1.

WITNESSES:
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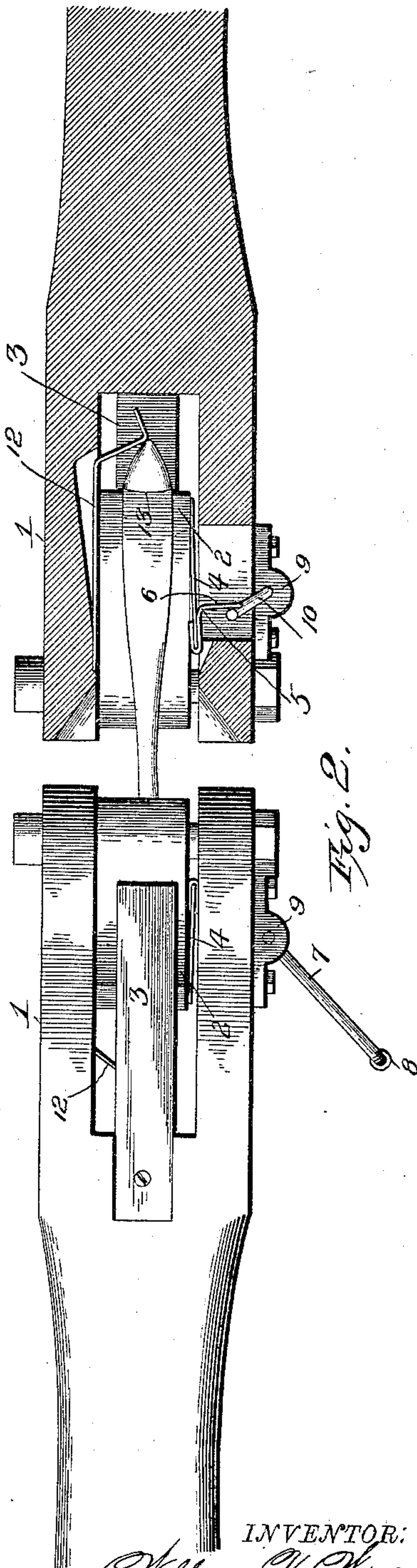


Fig. 2.

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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 433,385, dated July 29, 1890.

Application filed May 7, 1890. Serial No. 350,917. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM VICTOR WRAY, a citizen of the United States, and a resident of Cedartown, in the county of Polk and State of Georgia, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in car-couplings, the object being to provide a device which will automatically couple the cars as they come together without the necessity of a brakeman or other person going between them to manipulate the link, which is a dangerous proceeding, frequently resulting in serious and fatal accidents.

The invention consists in the novel construction and combination of parts, herein-after fully described, and definitely pointed out in the claims.

In the accompanying drawings, Figure 1 represents a sectional plan view of a car-coupling constructed in accordance with my invention, one of the draw-heads being broken away to show the interior construction. Fig. 2 is a central longitudinal section of the same.

In the said drawings, the reference-numeral 1 designates the draw-heads, which are recessed at their forward ends, providing a space for the working parts of the coupling. In the front ends of each draw-head are pivoted two backwardly-extending lugs 2, which are pressed inwardly toward the center of the draw-head by means of the springs 3, secured at their ends to the draw-head and their front ends bearing upon the rear ends of lugs 2. On the under side of each lug is a pivoted link 4, the other ends of which are connected together, forming a toggle-joint. At the points where these links are pivoted together is secured a plate 5, having its free end bent outwardly, forming a projecting arm 6, by which said toggle-links may be actuated by means of a cranked lever 7, having an operating-handle 8. This lever is pivoted in bearings 9 on the under side of the draw-head, and intermediate of said bearings it is

provided with or formed into a crank 10, which is adapted to strike against arm 6 and actuate the links. Upon the under side of the top portion of the draw-head is secured a rearwardly-projecting flat spring 12, having its free end bent downwardly and bearing against the coupling-link, and thus keeping it always pressed down upon the bottom of the draw-head.

The coupling-link is what is known as the "arrow-head" pattern—that is to say, it consists of a horizontal bar having its ends pointed or rounded, and a short distance from each end is formed with two vertical shoulders 13—one on each side of the bar—which engage with the lugs 2 of the draw-head. The two draw-heads are identical in every respect.

The operation will readily be understood. One end of a link is inserted in one of the draw-heads, the arrow-head pushing apart the lugs 2 until the shoulders 13 have passed beyond the ends thereof, when said lugs will be forced inward by the springs 3 closing upon the arrow-head and engaging with the shoulders thereof and firmly securing it in place. As the cars approach each other the free end of the coupling-link will enter the draw-head of the opposite car and be secured therein in the manner just described. The springs 12 will keep the link down upon the bottom of the draw-heads. To uncouple the cars, the lever 7 is actuated by the handle 8, which will cause the crank 10 to move the arms 6 backward, which are secured to the links 4, which in turn will actuate the lugs 2, throwing them apart and allowing the coupling-link to be withdrawn.

Having thus described my invention, what I claim is—

1. In a car-coupling, the combination, with the draw-head thereof, of the pivoted spring-actuated lugs, the links connected therewith and with each other, and an actuating-lever for operating said links and lugs, substantially as described.

2. In a car-coupling, the combination, with the draw-head 1 and the backwardly-extending lugs 2, pivoted therein, of the springs 3, secured to the draw-head and bearing against

said lugs, the links 4, pivoted to the lugs and to each other, the plate 5, having arm 6, and the pivoted lever 7, having crank 10, substantially as described.

- 5 3. In a car-coupling, the combination, with the draw-head 1, the backwardly-extending pivoted lugs 2, and the springs 3, secured to the draw-head and bearing against the lugs, of the links 4, connected together and pivoted
10 to lugs 2, the plate 5, connected with the links and having arms 6, the pivoted lever 7, pro-

vided with crank 8, and the spring 12, secured in the draw-head and adapted to bear upon the end of the coupling-link, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM VICTOR WRAY.

Witnesses:

J. S. COX,

D. F. NEESE.