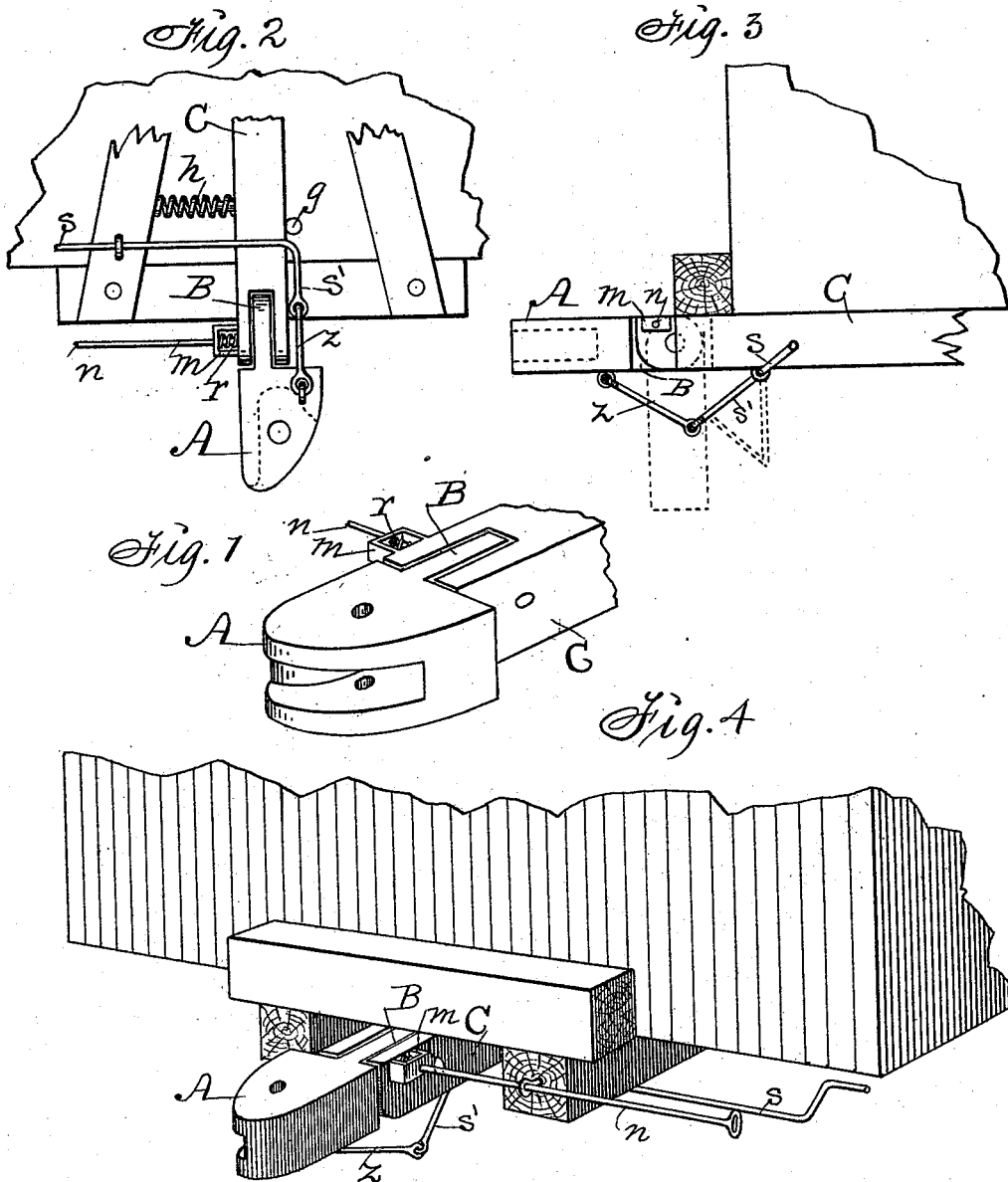


(No Model.)

W. S. BALES.
CAR COUPLING.

No. 418,671.

Patented Jan. 7, 1890.



Witnesses:

R. H. Orrig,
Ch. Stiles.

Inventor:

Walter S. Bales,
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UNITED STATES PATENT OFFICE.

WALTER S. BALES, OF DES MOINES, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 418,671, dated January 7, 1890.

Application filed October 21, 1889. Serial No. 327,738. (No model.)

To all whom it may concern:

Be it known that I, WALTER S. BALES, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Automatic Car-Coupling, of which the following is a specification.

My invention consists in the construction and combination of lifting mechanism and a locking device with a draw-bar and a hinged draw-head, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the draw-head hinged to a section of a draw-bar in such a manner that the head will swing vertically. Fig. 2 is a bottom view of a section of a car. Fig. 3 a side view, and Fig. 4 a perspective view showing my invention applied as required for practical use.

A is a draw-head of that class that moves laterally to engage a mating head in such a manner that the two will be reciprocally hooked together as required to automatically couple two cars when they come together on a track.

B is an extension on the rear end of the head, adapted to enter a corresponding slot in a draw-bar in such manner that it can be hinged to a draw-bar C by means of a pin *d*, to swing vertically in the act of uncoupling.

f is a link-cavity and *f'* a pin-hole in the head A, that adapts it to be coupled to a draw-head of common form by means of a common link and pin.

g is a pin or stop fixed to the under side of the car or a block fixed to the end of a car in such a manner that it will prevent the draw-bar from moving laterally in one direction.

h is a spring connected with the draw-bar and the car in such a manner that it will in its normal condition press the draw-bar against the stop *g*, as required to retain the draw-head in a central position relative to the end of a car.

m is a frame fixed to the side of the draw-bar to support a rod *n* and spring *r* in such a manner that the spring will in its normal condition press the end of the rod through coinciding horizontal perforations in the draw-bar and the extension B of the draw-head, as required to retain the head extend-

ing forward from the end of the draw-bar and in proper position to engage a mating draw-head, and also to relieve the pin *d* from part of the draft force to which it would otherwise be subjected.

To uncouple two cars when connected by means of my hinged draw-heads, I simply pull the rod *n* outward to disengage it from the extension B of the head and allow the head to drop by force of gravity into a vertical pendent position, as indicated by dotted lines in Fig. 3.

s is a rock-shaft in bearings fixed to the car. It has an arm *s'* at its inner end, which is connected with the draw-head by means of a rod *z* in such a manner that the pendent head can be lifted by a person at the side of the car by simply operating the shaft, as required to let the rod *n* engage the extension B to retain the head A elevated and in position for coupling with a mating head and another car.

I claim as my invention—

1. The frame *m*, rod *n*, and spring *r*, in combination with the draw-bar C, and the head A, having an extension B, to operate in the manner set forth, for the purposes stated.

2. An improved automatic car-coupler comprising a draw-bar having lateral motion and a jaw hinged to its front end to move laterally with the bar in the act of coupling and to swing vertically in uncoupling, and a spring-actuated bolt or rod in bearings attached to the side of the draw-bar, having a perforation to admit the bolt to enter a coinciding perforation in the rear portion of the hinged head, and a rock-shaft having an arm for lifting the hinged head from a vertical to a horizontal position, arranged and combined with a car to operate in the manner set forth, for the purposes stated.

3. The draw-head A, hinged to the bar B, the frame *m*, rod *n*, and spring *r*, attached to the side of the bar, the rock-shaft *s*, having an arm *s'*, and the rod *z* on the under side of the bar and head, arranged and combined with a car substantially as shown and described, for the purposes stated.

WALTER S. BALES.

Witnesses:

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