(No Model.)

J. D. RIPSON.

CAR COUPLING.

No. 356,663. Patented Jan. 25, 1887.

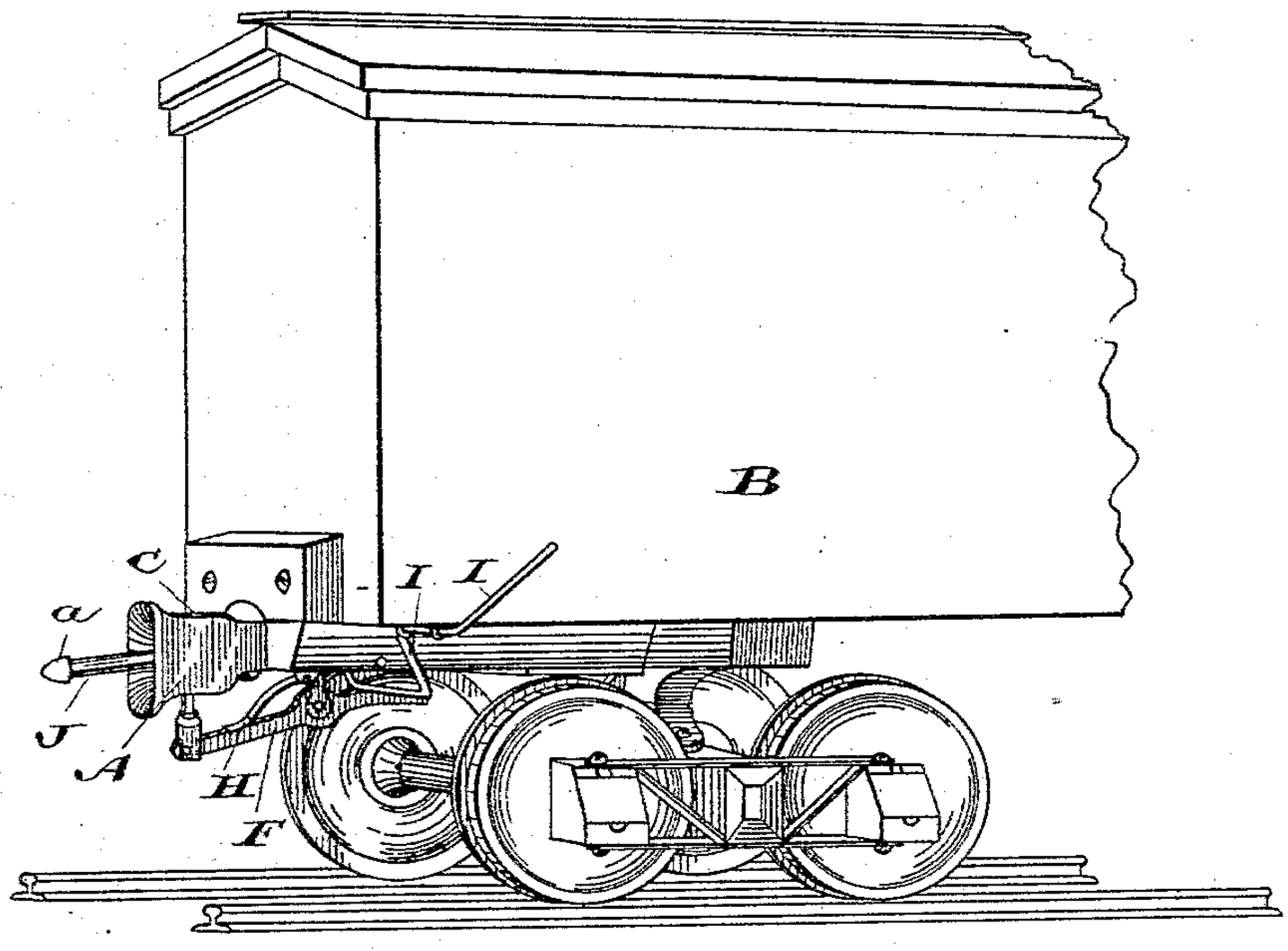

Fig. 1.

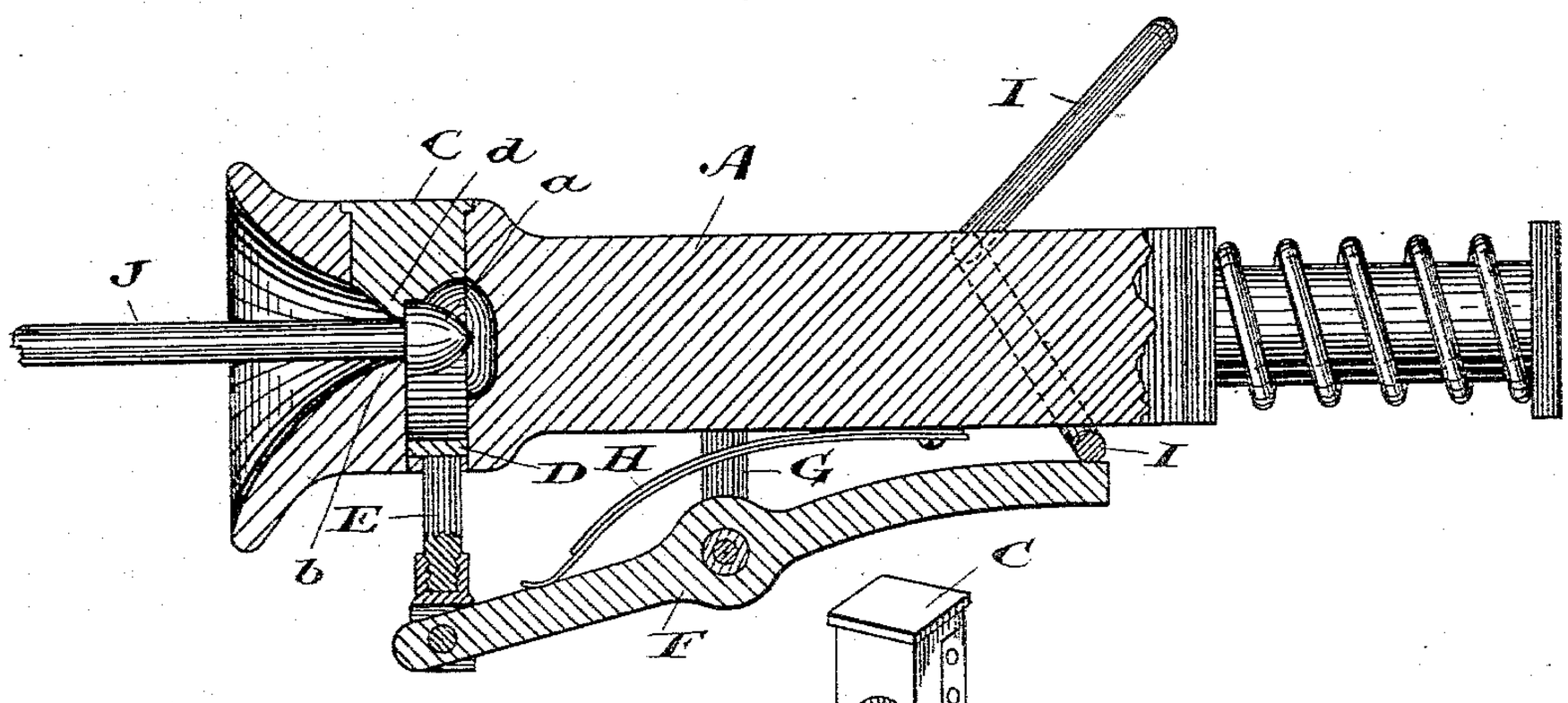

Fig. 2.

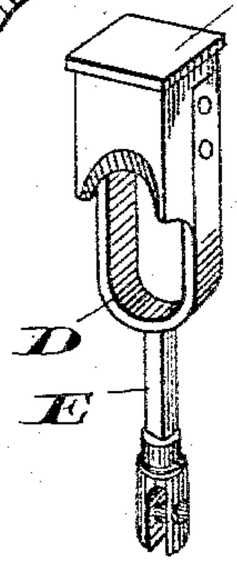

Fig. 3.

Witnesses.
J. M. Jackson
Chas. H. Hicks

Inventor:
J. D. Ripson
by Donald C. Ridout & Co
Attys

UNITED STATES PATENT OFFICE.

JOHN D. RIPSON, OF TORONTO, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF TO ROBERT WATSON, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 356,663, dated January 25, 1887.

Application filed June 17, 1886. Serial No. 205,443. (No model.)

To all whom it may concern:

Be it known that I, JOHN DANFORD RIPSON, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, machinist, have invented an Improved Automatic Car-Coupler, of which the following is a specification.

The object of the invention is to design a simply-constructed and efficient self-acting car-coupler; and it consists, essentially, in placing within a slot formed in the top side of the draw-head a block having a loop formed on its bottom, with a spindle extending from the said loop to pass through a hole in the bottom side of the draw-head, and connected with a lever pivoted on a bracket attached to the bottom side of the draw-head and actuated by a spring and crank-lever, substantially as and for the purpose hereinafter more particularly explained.

Figure 1 is a perspective view of an end of a car provided with my improved self-acting car-coupler. Fig. 2 is a sectional detail of the draw-head and parts connected therewith. Fig. 3 is a perspective detail of the block.

A is the draw-head, connected to the bar B, as shown, or in any suitable manner.

C is a block inserted into a slot made in the top side of the draw-head A. On the bottom of the block C a loop, D, is formed, from which loop the spindle E extends and passes through the bottom side of the draw-head A.

F is a lever pivoted in the bracket G, attached to or forming part of the draw-head A. A spring, H, is also connected to the bottom of the draw-head A, and is designed to act on the lever F, so as to hold the block C down.

I is a crank-rod journaled in the bottom of the car B, and so arranged that by turning the said crank-rod the end of the lever F, against which it acts, will be pressed down and the opposite end of the lever pressed up, so that the block C may be raised, notwithstanding the downward tension of the spring H.

J is a link-pin having enlarged conical heads *a*. When the head *a* is inserted into the loop D, it comes in contact with the bottom of the block C, raising the said block sufficiently to permit the said head *a* to pass till its shoulder passes the shoulder *b*, formed on the bottom side of the draw-head A, forming a portion of the grip for the link-pin J. A corresponding shoulder, *d*, is formed on the bottom of the block C, and by the action of the spring H the head *a* of the pin J is gripped by the said shoulders *b* and *d* immediately that the head *a* passes them.

In order to release the pin J, the crank-rod I is turned so as to press down its end of the lever F, which causes the opposite end of the said lever to rise, elevating with it the block C, carrying the shoulder *d* away from the head *a*. Immediately afterward the bottom of the loop D comes in contact with the head *a* and raises it clear of the shoulder *b*, leaving the link free to be withdrawn.

From this description it will be seen that the coupler is perfectly automatic, it being merely necessary to slip the link-pin J onto the draw-head of one car, A, and bring it up so that the other end of the link shall enter the draw-head on the other car, when the coupling will immediately be effected, as described.

Should it be desired to avoid coupling, it is merely necessary to set the crank-rod I so as to hold down its end of the lever F, which action holds the block C, so that no coupling can be effected.

Although I have shown the crank-rod I as being worked merely from the sides of the car, it will be understood that it can be operated equally as well from the top by a very simple arrangement of rods.

What I claim as my invention is—

1. A draw-head, A, having a block, C, fitted within it, and a loop, D, formed in the said block to receive the conical head *a* of the link-pin J, and a spindle, E, to pass through the bottom of the draw-head A, in combination with the pivoted lever F and the spring H, attached to the draw-head and bearing directly on said lever independent of the spindle E, substantially as and for the purpose specified.

2. A draw-head, A, having a recess or slot formed in it to receive the block C, and a shoulder, *b*, in combination with the said block C, having a shoulder, *d*, formed on it, and a loop, D, attached to it, from which loop a spindle, E, extends, to be actuated on by a spring, substantially as and for the purpose specified.

3. A draw-head, A, having a block, C, fitted

within it, and a loop, D, formed in the said block to receive the conical head *a* of the link-pin J, and a spindle, E, to pass through the bottom of the draw-head A, in combination with the pivoted lever F, actuated by the spring H and crank-rod I, substantially as and for the purpose specified.

4. The draw-head A, having a recess or slot formed in it to receive the block C, in combination with the said block C, formed with a loop, D, and spindle E, and the lever F, connected with said spindle, the spring H, secured to the draw-head and bearing directly on said lever, and the crank-rod I, substantially as and for the purpose specified.

Toronto, May 27, 1886.

JOHN D. RIPSON.

In presence of—

CHARLES WRIGHT CLINTON BALDWIN,
ALICE KATE THOMPSON.