(No Model.) 2 Sheets—Sheet 1.

A. RUSHFORTH.

CAR COUPLING.

No. 538,085. Patented Apr. 23, 1895.

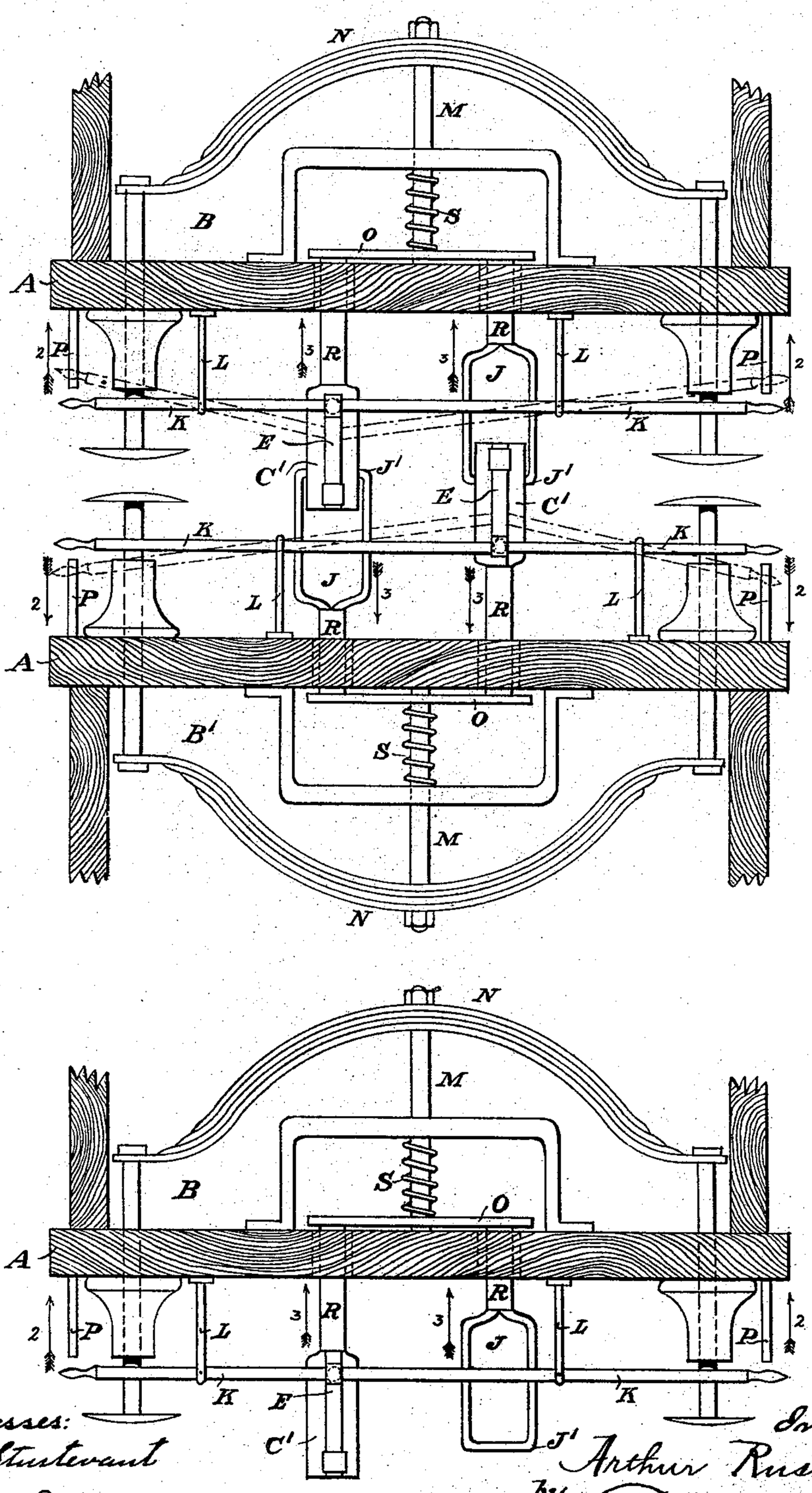

FIG. 1.

Witnesses:
E. K. Stutevant
H. van Oedenneel

Inventor:
Arthur Rushforth
by Richards & R
Attys

(No Model.) 2 Sheets—Sheet 2.

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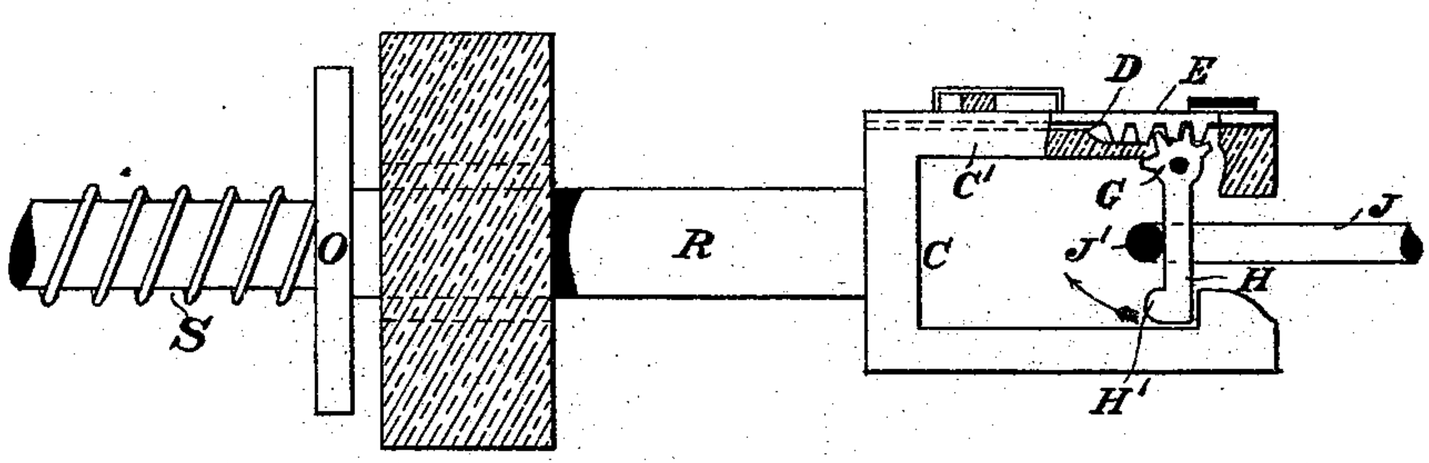

FIG. 2.

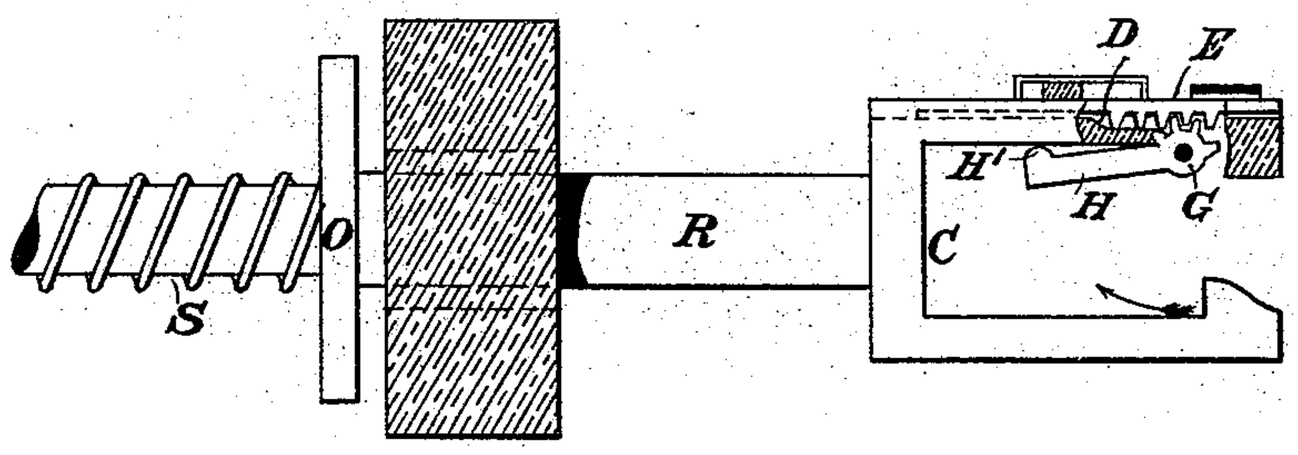

FIG. 3.

Witnesses:
E. K. Sturtevant
H. van Oldenneel

Inventor:-
Arthur Rushforth
by Richards & Co
Attys.

UNITED STATES PATENT OFFICE.

ARTHUR RUSHFORTH, OF BRADFORD, ENGLAND, ASSIGNOR OF ONE-HALF TO JOHN SOWDEN, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 538,085, dated April 23, 1895.

Application filed June 6, 1894. Serial No. 513,622. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR RUSHFORTH, a subject of the Queen of Great Britain and Ireland, residing at Bradford, in the county of York, England, have invented certain Improvements in Automatic Couplings for Railway-Wagons and Like Vehicles, of which the following is a specification.

This invention relates to certain improvements in the method of and apparatus for coupling railway wagons and like vehicles, and has for its object, the automatic coupling of such vehicles upon the same coming in contact with each other, without the necessity of an attendant having to pass between, or underneath the wagon, as is the case with couplings of the ordinary description, thereby minimizing the danger of accident, and at the same time effecting a saving of labor.

In order that my invention may be fully understood, I will describe the same in detail by making reference to the accompanying sheets of drawings, in which—

Figure 1 represents a plan view of such portions of two railway wagons connected together by my improved coupling, as is necessary to illustrate my invention. Figs. 2 and 3 are enlarged details.

To the head stock A. of a wagon undercarriage or the like B, I mount a bracket C. prepared on its top side C′. with a groove D. to receive the sliding bar E. formed with a toothed rack which engages with a quadrant G. formed on the door H. mounted on the before mentioned bracket C. To the said head stock A. I mount a staple J. in the same horizontal position as the bracket C. The opposite wagon undercarriage B′. is fitted with a similar apparatus but with the bracket C. and staple J. in the reversed position. On the two wagons coming together, the staples J. J. come in contact with the doors H. mounted in the respective brackets C. C. operating same in the direction of arrow, such a distance, until the said doors H. are clear of the ends J′. J′. of staples J. J. when the said doors fall by their own weight to their normal position, whereby the staples J. J. are prevented from disengaging with the brackets C. C. The wagons are then effectually coupled. If desired the said doors H. may be weighted at the bottom end at H′. in order to insure the quick action of closing.

To the sliding bar E. I connect the levers K. K. each mounted on a fulcrum pin in brackets L. L. fixed in any convenient manner, the said levers K. K. passing respectively to each side of the wagon, and upon the operation of the levers K. K. in the direction of arrow 2 the before mentioned sliding bars E. E. are operated in the opposite direction, and the toothed racks engaging with quadrants G. on doors H. are moved to the position shown by Fig. 3. thus allowing the wagons to be disconnected.

In order to obviate the strain in the couplings caused by the sudden movement of the wagons, I support the couplings in bushes secured in the head stocks A. connected together by a plate O. and coupled by rod M. to the ordinary buffer spring N. which yields, thus relieving any sudden strain on the couplings when the wagons are put in motion.

When it is desired that the wagons may be brought together without being coupled, as is the case when shunting during the "making up" of a train, the levers K. K. may be held in the position shown by dotted lines by means of a catch bar P. whereby the doors H. will remain in the position shown by Fig. 3.

Behind each plate O. may be mounted a spiral spring or the like S. for the purpose of forcing the brackets C. C. and staples J. J. back to their normal position should they be moved in the direction of arrow 3 during the process of shunting.

As shown in the drawings, the coupling is applied to railway wagons, which necessarily require what is known as a "slack coupling," but it will be easily understood that my coupling is capable of being applied as a "tight coupling" to passenger trains, by making the connecting bars R. proportionately shorter than shown on the drawings.

What I claim is—

A coupling, consisting of the bracket C

forming the drawhead of the vehicle, a vertically swinging door H pivoted at its upper end, a quadrant on the upper end thereof, a horizontally sliding rack bar extending rearwardly and an operating lever, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR RUSHFORTH.

Witnesses:

WM. PREST,

JOHN WAUGH,

C. E., Bradford.