(No Model.)

C. O. ALLISON.

CAR COUPLING.

No. 467,220. Patented Jan. 19, 1892.

Fig. 1.

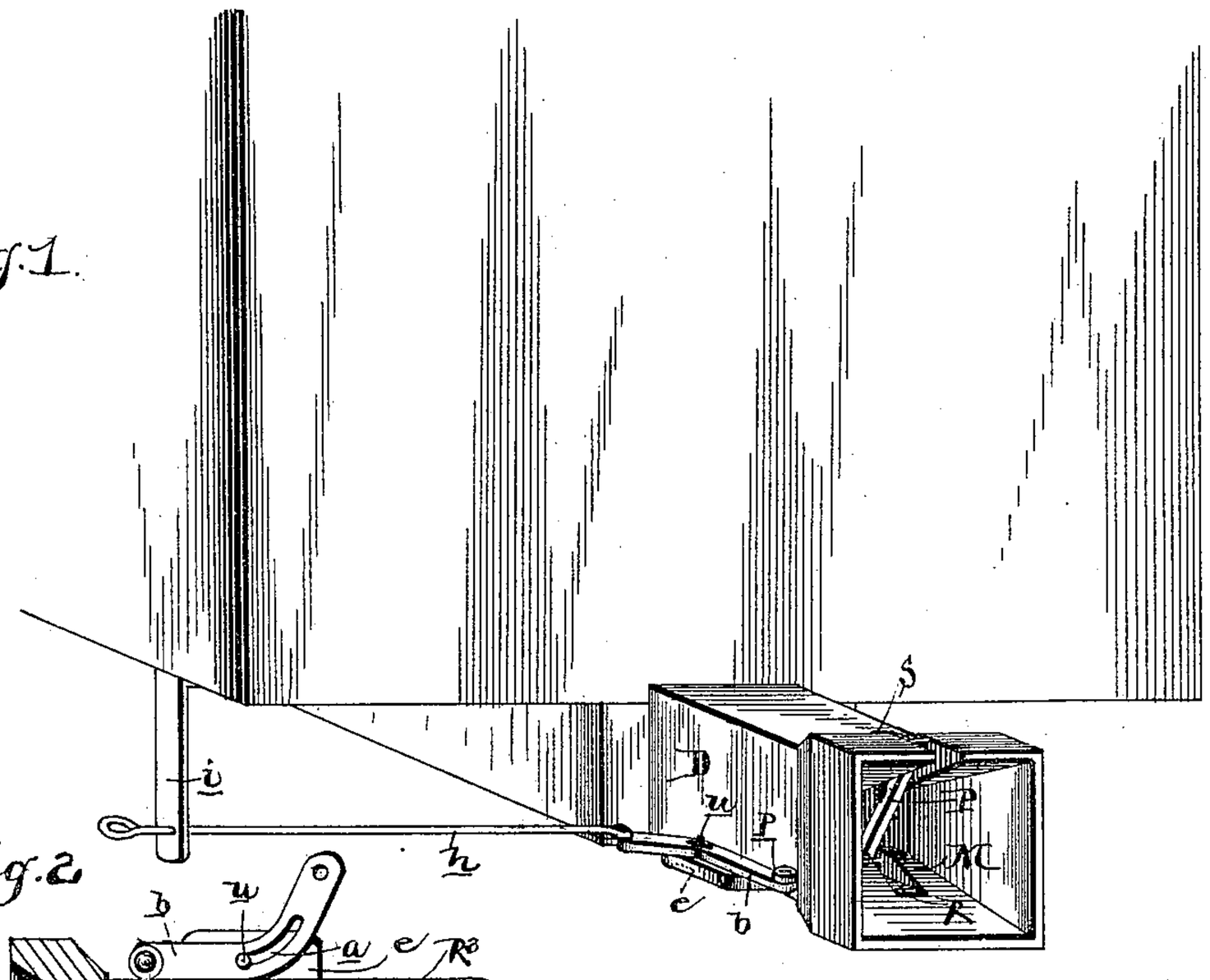


Fig. 2.

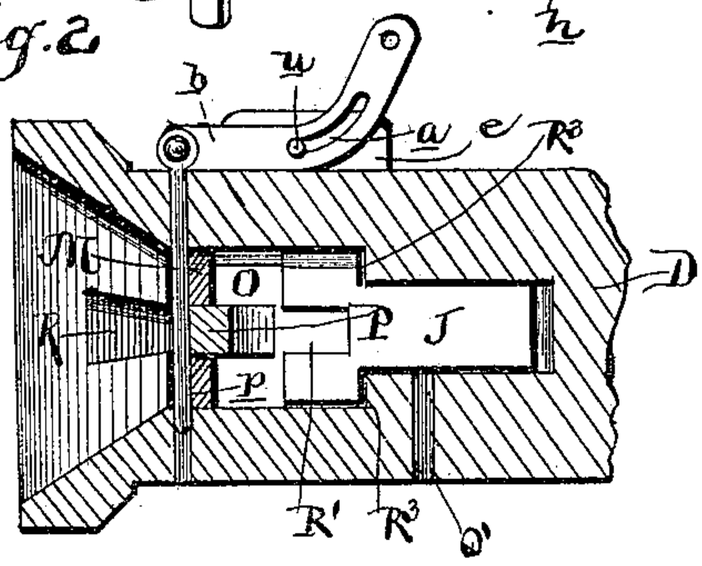


Fig 3.

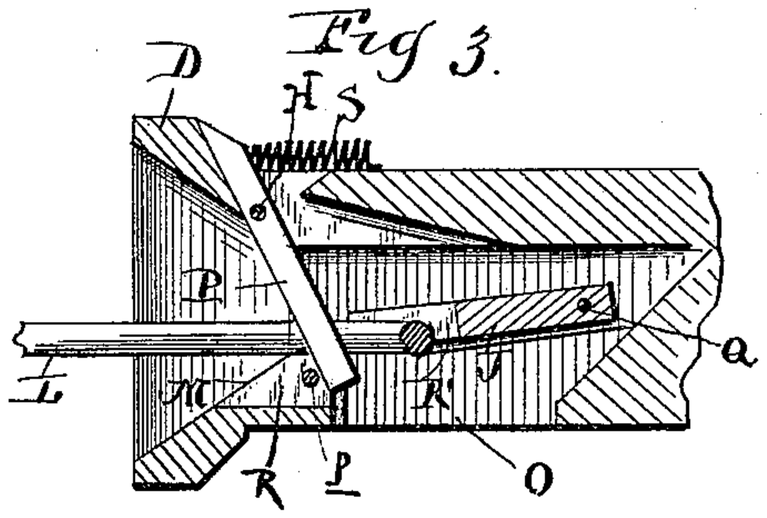


Fig 4.

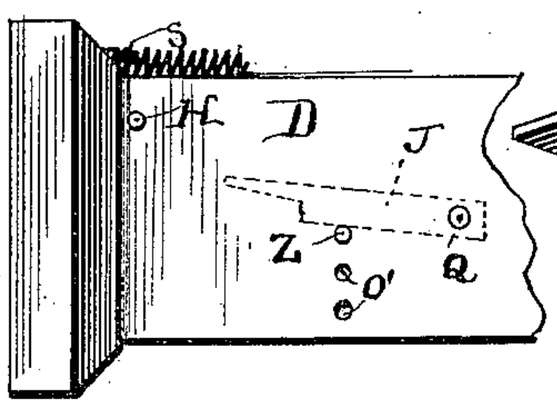
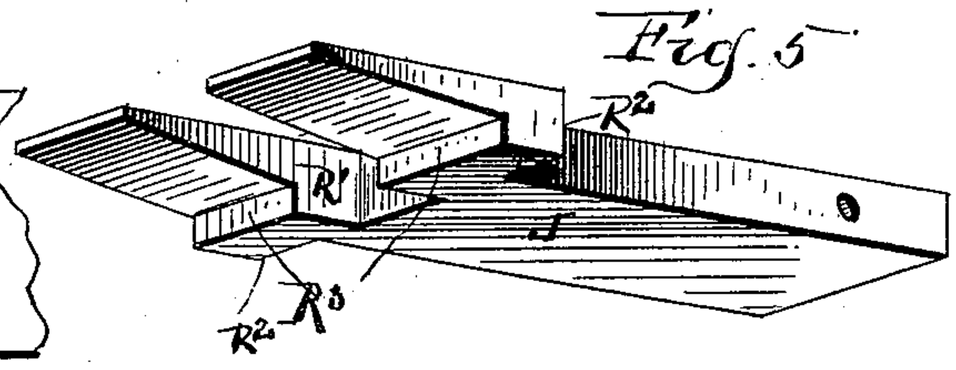


Fig. 5



Witnesses
H. G. Seitz
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By His Attorneys,
Chas. O. Allison,
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Inventor

UNITED STATES PATENT OFFICE.

CHARLES O. ALLISON, OF MISSOULA, MONTANA, ASSIGNOR OF ONE-HALF TO ROBERT H. CHILDS, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 467,220, dated January 19, 1892.

Application filed August 15, 1891. Serial No. 402,754. (No model.)

To all whom it may concern:

Be it known that I, CHARLES O. ALLISON, a citizen of the United States, residing at Missoula, in the county of Missoula and State of Montana, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to car-couplings, and more especially to that class thereof known as "link-lifters;" and the object of the same is to effect certain improvements in car-couplings of this character.

To this end the invention consists in the specific details of construction hereinafter more fully described and claimed, and as illustrated on the sheet of drawings, wherein—

Figure 1 is a perspective view of the end of a car, looking partly from the upper side, my improved coupling being attached thereto. Fig. 2 is a horizontal section of the draw-head and a plan of the catch-operating devices. Fig. 3 is an enlarged central longitudinal section showing the means for holding the link elevated. Fig. 4 is an elevation of the left side of the draw-head, the link-lifter being illustrated in dotted lines. Fig. 5 is a perspective detail of the link-lifter.

Referring to the said drawings, the letter D designates the draw-head, having an open bottom O and forward thereof a beveled mouth forming a shoulder M, and provided with a longitudinal slot or recess R at its bottom to permit the tip of the pin P to swing forward in the act of uncoupling. The said pin is mounted on a horizontal pivot H in a slot in the body of the draw-head above the mouth, and its upper end is pressed normally forward by a spring S.

L is the link, which is of the usual construction, and which when passed into the mouth bears the pin to the rear until the latter swings into position through the link.

The pin is locked against swinging forward to permit the link to withdraw by a catch constructed as follows: *p* is a transverse pin passing through the draw-head and across the recess R, its outer end being pivotally connected to a bell-crank lever *b*, having an arc-shaped slot *a* at its angle. *e* is an ear cast on the right side of the draw-head and having an upwardly-projecting pin *u*, passing loosely through said slot. *h* is a handle-bar passing through an eye *i* on the end of the car and leading to the side thereof, and the inner end of this bar is pivotally connected with the rear end of the bell-crank lever *b*. By this construction the handle-bar may be moved longitudinally by an operator standing at the side of the track, and the result will be that the pin *p* will be moved transversely through the draw-head and its tip will be made to move across or out of the recess R. When across said recess, the swinging pin P is prevented from moving forward to allow the link to pass out, and when out of said recess the pin can swing forward and the link can draw out. The spring S then returns the pin P to its normal position, as seen in Fig. 3, when another link can be forced into the draw-head and the pin will automatically engage the same, as will be clear.

The link-lifter comprises a wedge-shaped block J, pivotally mounted on a horizontal pin Q in the rear end of the opening in the draw-head, and this block is of sufficient weight to hold the link L at any desired angle by simply resting upon its inner end when the body of the link passes over the shoulder M at the mouth of the draw-head. In the left side of the draw-head is a number of openings O′, and in one of these is removably inserted a pin Z for limiting the downward movement of the link-lifter, and hence the height at which the front end of the link shall stand. The front edge of the link-lifter is the narrower and is provided with a recess R′ in alignment with and in continuation of that lettered R in the bottom of the mouth of the draw-head, and by this means the tip of the pin P may swing to the rear, even though the link-lifter stands in the path of said tip. The body of the link-lifter has at each side a rearwardly-facing shoulder R^2, which is adapted to abut against a similar shoulder within the draw-head if the link-lifter should be driven to the rear, and on its under side said link-lifter is provided with forwardly-facing shoulders R^3, against which the rear end of the link strikes as it is forced into place. By this means it will be seen that the pounding action of the link as it comes into the draw-head is taken off of the pivot-pin Q.

A car-coupling of this construction can be very cheaply and easily manufactured, and is very simple and durable in use. It will couple to any of the ordinary car-couplings now so extensively used, and can be operated entirely from the side of the track without going between the cars, while if the link-lifter should stick or become clogged the operator can gain access thereto through the open bottom O of the draw-head.

What is claimed as new is—

1. In a car-coupling, the combination, with the draw-head having a longitudinal recess in the bottom of its mouth, a pin pivoted in a slot in said draw-head above the mouth with its tip swinging through said recess, and a spring holding said pin normally in rear of the recess, of a catch, substantially as described, passing transversely across the recess, and means for operating it from the side of car, as set forth.

2. In a car-coupling, the combination, with the draw-head having a longitudinal recess in the bottom of its mouth, a pin pivoted in said draw-head above the mouth with its tip swinging through said recess, and a spring holding said pin normally in rear of the recess, of an ear on one side of the draw-head, a pin rising therefrom, a bell-crank lever having an arc-shaped slot at its angle engaging said pin, a transverse pin connected to one end of said lever and passing through the draw-head and across said recess, and a handle-bar connected with the other end of said lever and extending outward to the side of the car, as set forth.

3. In a car-coupling, the combination, with the draw-head having a longitudinal recess at the bottom of its mouth, a swinging pin pivoted in said draw-head with its tip passing through said recess, and a catch for locking said pin, of a wedge-shaped link-lifter mounted on a horizontal pin across the rear end of the opening in the draw-head, the front end of this link-lifter having a longitudinal recess aligning with that in the draw-head, and means for adjusting the height of such front end, as set forth.

4. In a car-coupling, the combination, with the draw-head having the usual longitudinal opening with a shoulder in the bottom thereof in rear of its mouth, and the pin, of a wedge-shaped link-lifter, its larger end pivotally mounted on a horizontal pin across the rear end of the opening in the draw-head, the latter being provided with a series of openings in one side, and a pin removably inserted in one of said openings for limiting the downward movement of the link-lifter, as set forth.

5. In a car-coupling, the combination, with the draw-head having a longitudinal recess at the bottom of its mouth, a swinging pin pivoted in said draw-head with its tip passing through said recess, and a catch for locking said pin, of a wedge-shaped link-lifter mounted on a horizontal pin across the rear end of the opening in the draw-head, the front end of this link-lifter having a longitudinal recess aligning with that in the draw-head, a forward-facing shoulder across the bottom of and backward-facing shoulders at the sides of said link-lifter, and shoulders in the draw-head engaging those at the sides, substantially as hereinbefore set forth.

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

CHARLES O. ALLISON.

Witnesses:

J. M. DIXON,

FRANK WOODY.