

(No Model.)

L. T. BACKUS.
CAR COUPLING.

No. 531,145.

Patented Dec. 18, 1894.

Fig. 1.

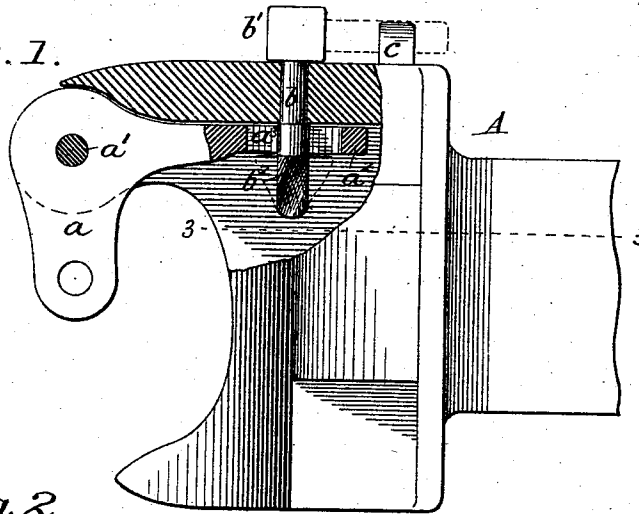


Fig. 2.

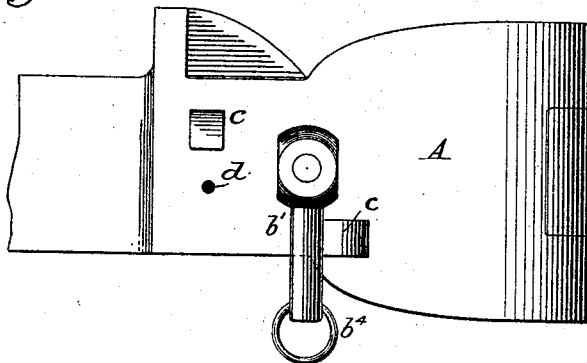


Fig. 3.

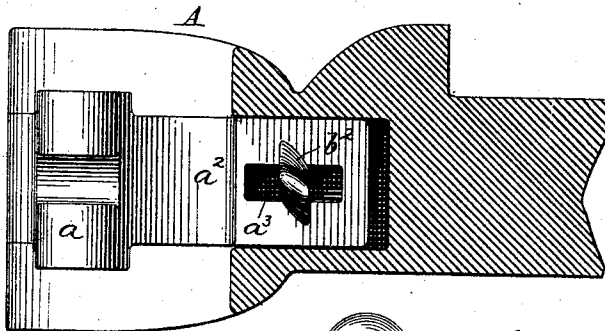
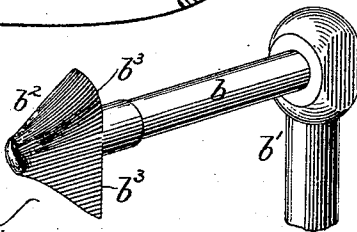


Fig. 4.

Witnesses
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LAWRENCE T. BACKUS, OF ATCHISON, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 531,145, dated December 18, 1894.

Application filed March 10, 1894. Serial No. 503,154. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE T. BACKUS, of Atchison, in the county of Atchison and State of Kansas, have invented new and useful Improvements in Car-Couplings; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to car couplings of the Janney type, and has particular reference to that kind in which there is employed a hook-nose provided with a rearwardly extending lever-arm having means for automatically locking it, and my improved coupling is designed especially for use with passenger cars, although, obviously, it may be employed on freight cars.

The object of my invention is to provide a simple, durable and thoroughly efficient coupler, in which the locking device will be certain in its action, without liability of becoming accidentally displaced.

To these ends my invention consists in the construction and combination of parts as hereinafter described and claimed.

In the accompanying drawings,—Figure 1 is a plan view of my improved coupler. Fig. 2 is a side elevation of the same. Fig. 3 is a section on line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of the spiral arrow-head lock.

Similar reference letters indicate the same parts in the several views.

The drawhead A is represented as of the usual form of this type of coupler, and having a hook-nose *a* pivoted in the head at *a'*. The rearwardly-extending arm *a²* of the hook-nose constitutes the lever-arm, and it is provided with an elongated slot *a³*, which is here shown as horizontal, but which may extend in a vertical or in any other direction, provided the wings of the arrow-head lock presently described are correspondingly altered as to their normal position.

Mounted in a bearing in the side of the draw-head is the locking device shown in detail in Fig. 4. It consists of a short bar or shaft *b*, having a crank or handle *b'* rigidly affixed to or integral with the shaft, the in-

ner end of the latter having two wings *b²* projecting from opposite sides thereof, the heels of the wings being at right angles to the axis of the shaft to form locking shoulders *b³* for the lever-arm. The sides of the wings have beveled surfaces in the form of a spiral, so that the shaft may be turned as hereinafter described.

The sides of the slot *a³* of the lever-arm operate on the spiral wings to turn the shaft, the crank arm of which projects at such an angle relatively to a line drawn through the two wings as to cause the latter to present their heels or shoulders at a right angle to the length of the slot.

On the outside of the drawhead are two stops, *c, c*, to limit the movement of the crank or weight *b'*, and the end of the latter is provided with any suitable means, as a link *b⁴*, to which the operating means may be connected.

In the normal position of the locking device, the handle or weight *b'* hangs vertically against the lower stop *c*, and the rear parts or shoulders of the wings extend in a plane at a right angle to the slot *a³*. When the coupler is open, and is to be closed, the swing of the hook-nose causes the sides of the slot *a³* to engage the forward ends of the wings and to turn the shaft *b* gradually, but quickly, until the lever-arm comes to a full stop against the side of the drawhead. At this point, the lever-arm and its slot have passed entirely over the wings and the weight of the handle *b'* causes the shaft to return to its normal position, with the shoulders *b³* locking the lever-arm.

To unlock the coupler, the handle *b'* is moved to the upper stop *c* and this brings the wings *b²* in line with the slot of the lever-arm, leaving the hook-nose free to be turned on its pivot.

When it is desired to prevent the automatic coupling of the cars, a pin may be inserted in the hole *d* in the side of the drawhead to keep the crank or handle *b'* against the upper stop *c*.

Having now described my invention, what I claim is—

1. In a car-coupling, the combination with the pivoted hook having a slotted lever-arm, of a rotatable stud or shaft having spiral

wings adapted to be acted upon by the sides of said slot, substantially as described.

2. In a car-coupling, the combination with the pivoted hook having a slotted lever-arm, of a rotatable stud or shaft provided with two shoulders having beveled surfaces, a weight connected with said shaft for normally holding the shoulders across the slot of the lever-

arm, and means for rotating said shaft, substantially as described. 10

In testimony whereof I affix my signature in presence of two subscribing witnesses.

LAWRENCE T. BACKUS.

Witnesses:

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HARRY Y. DAVIS.