(No Model.)

T. P. BEADLE.

CAR COUPLING.

No. 509,590. Patented Nov. 28, 1893.

Fig. 1.

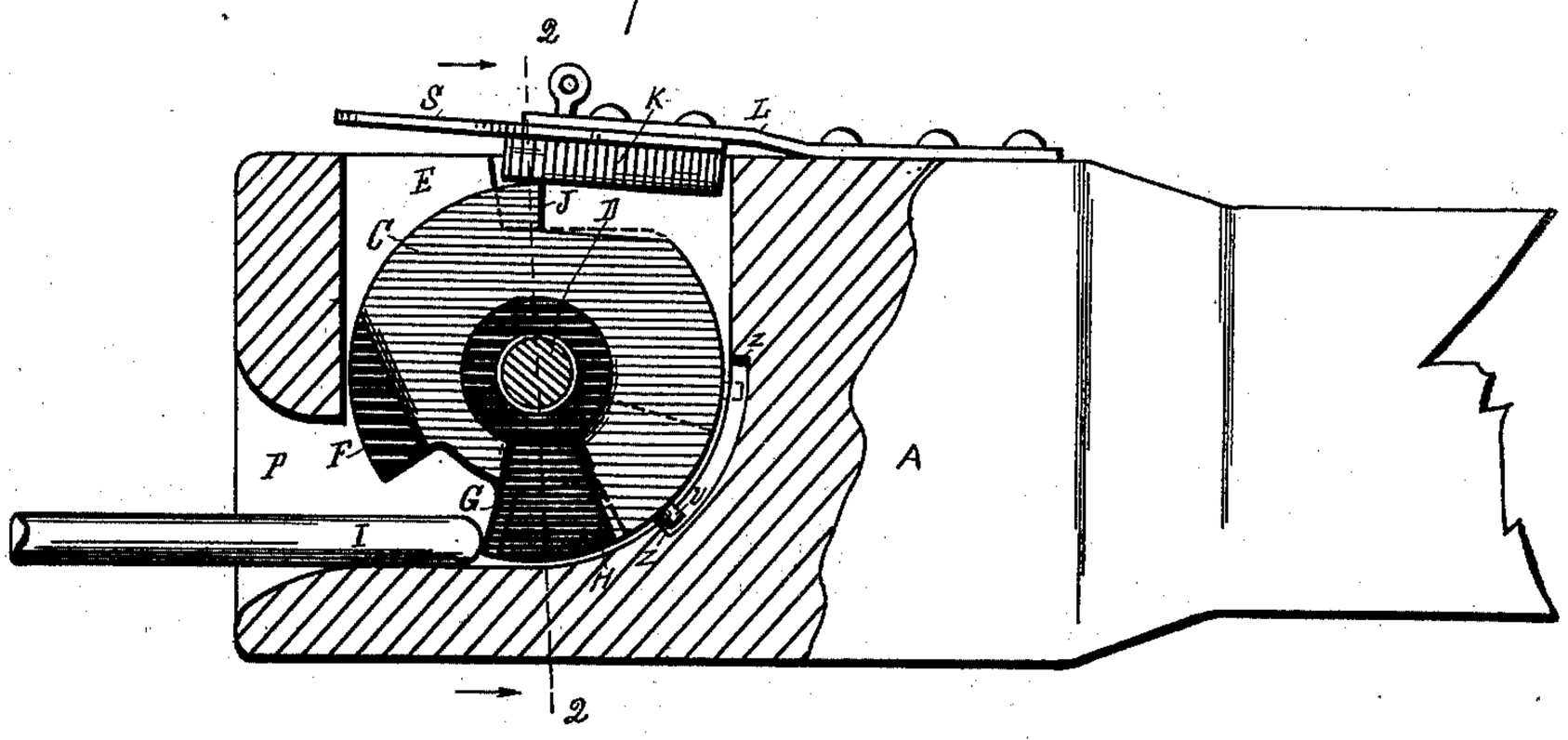


Fig. 2.

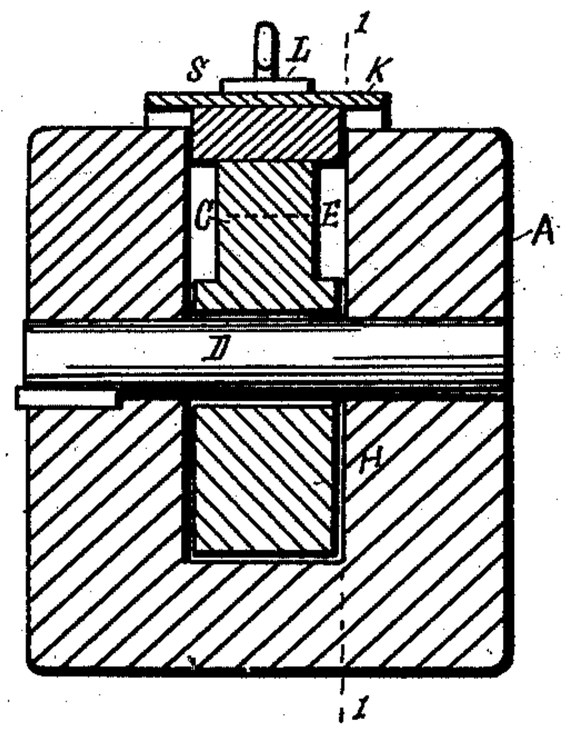
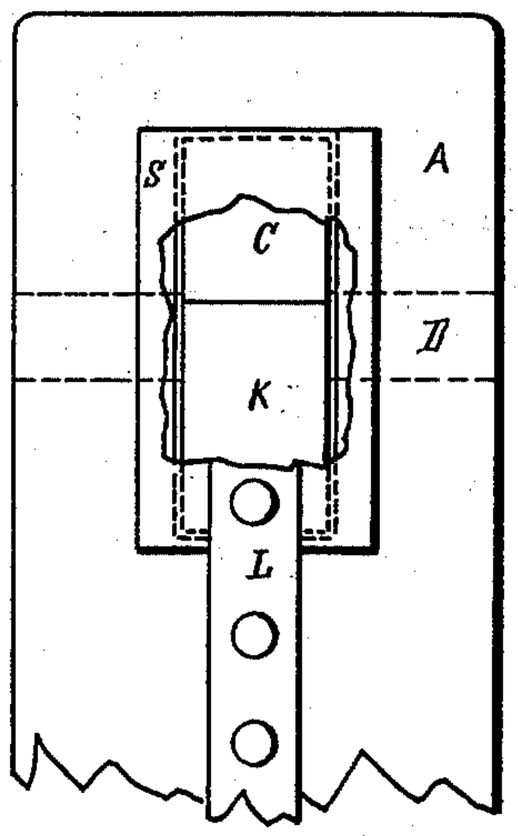


Fig. 3.



WITNESSES

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THOMAS P. BEADLE, OF CLIMAX, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 509,590, dated November 28, 1893.

Application filed March 25, 1893. Serial No. 467,535. (No model.)

To all whom it may concern:

Be it known that I, THOMAS P. BEADLE, a citizen of the United States, residing at Climax, (Scott's P. O.,) county of Kalamazoo, State of Michigan, have invented a new and useful Car-Coupler, of which the following is a specification.

This invention has for its object a simple construction, automatically operated by the coupling link, in a sure and effectual manner, doing away with spring-actuated sliding blocks and falling pins, with a design to produce a coupler which may wisely be adopted by railway men.

In the drawings forming a part of this specification, Figure 1 is a side elevation, parts being in section on the dotted line 1—1, in Fig. 2, looking from a point at the right. Fig. 2 is a section on the dotted line 2—2, in Fig. 1, looking from a point at the left; and Fig. 3 is a plan view, with parts broken away.

Referring to the lettered parts of the drawings, A represents the draw-bar of a car. This draw-bar is mortised or recessed in from the top, as at E, the lower rear portion of said recess being curved in form and the recess from thence being extended outward through the end of the draw-bar, as at P.

At C is a wheel loosely passed into said recess E and revolubly mounted upon a shaft, D, which shaft is passed transversely through the draw-bar and rigidly keyed therein, Fig. 2. If preferred, the wheel C and shaft D may be rigidly attached to each other and adapted to revolve together.

The wheel C is provided with a hook, F, and a shoulder, G, formed by making a U-shaped notch in the periphery of said wheel, as in Fig. 1. It will be observed that the axle or shaft D, is central to the wheel, C, so that the periphery of said wheel, when the latter rotates, traverses a true circle, for which reason I am enabled to make the end of the hook which engages the link, straight, like the shoulder G, which greatly facilitates uncoupling. In order that the shoulder G, of this centrally pivoted wheel, C, shall be brought to a proper position by gravity, ready for the contact of the link I therewith in coupling, I weight a portion of the wheel, at the shoulder G, as indicated at H, in Fig. 1. The wheel is also provided with a shoulder, J, formed by notching in the periphery thereof, Fig. 1.

In the upper opening of the mortise or recess E, is a pawl, K, in form representing a block, said pawl being attached to and supported by a spring metal bar, L, said bar being attached to the draw-bar A, the use of which will be explained in the operation. If desired, a plate, S, may be employed, attached to the pawl, for covering the open mortise or recess, E, to exclude snow, rain and dirt.

In the back side of the recess E, is a groove, forming shoulders, *z z*, and the wheel C is provided with a projection, *v*, in said groove, forming a stop to contact with said shoulders, *z z*, to limit the movement of said wheel. However, this stop may not be absolutely necessary, but is still desirable. The link employed is designed to be the same as the ordinary links now employed for coupling cars, but of course it may consist of a bar having holes in the ends to receive the hook, F.

In the operation, when two cars come together the link, I, will enter the opening, P, of the recess E, and come against the shoulder G, of the wheel, as in Fig. 1, said shoulder having been brought to this position by gravity when the cars were uncoupled. The pressure of the link against this shoulder, G, will revolve the wheel a sufficient distance backward to cause the hook, F, to enter said link, at which time the spring-actuated pawl, K, will be forced to place by the elasticity of the spring, L, to engage the shoulder, J, of said wheel, thus locking the wheel with the cars coupled. It will be observed that since the curvature of the lower rear portion of the recess E, and the curvature of the lower rear periphery of the wheel C, are parallel with and near to each other, the link cannot by any means be forced between the periphery of the wheel and the surface of the recess. It will also be observed that since the periphery of the wheel, where the hook is formed, will be parallel with and near to the curved portion of the recess when the cars are coupled, the link cannot by any means draw off from said hook. When uncoupling the cars the pawl is raised, disengaging it from the shoulder, J, at which time the wheel rolls back to its normal position by gravity and the link is withdrawn, during which action the hook will be raised

out of and disengaged from the link, said hook in being raised moving in a circular plane. The pawl may be raised by hand or some well-known lever arrangement may be employed, operated at the top or side of the cars, for raising said pawl. If a sufficiently stiff spring is employed, the engagement of the pawl with the periphery of the wheel might serve to hold the wheel in its normal position, ready for coupling.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A car-coupler comprising a draw-bar internally recessed, the lower portion of said recess being curved in form, a revoluble wheel in said recess, said wheel being notched in its periphery, forming the hook and the shoulder for contacting with the link, that portion of the wheel bearing said hook and shoulder being on a corresponding curve with the curved portion of the recess, said wheel being provided with a peripheral shoulder for engagement with a pawl, a spring-actuated pawl adapted to be disengaged from said shoulder against a spring resistance, and a coupling link; substantially as set forth.

2. A car-coupler comprising a draw-bar internally recessed, said recess opening through the top of the draw-bar, the lower portion of said recess being curved in form, a revoluble wheel in said recess, said wheel being notched in its periphery, forming the hook and the shoulder for contacting with the link, that portion of the wheel bearing said hook and shoulder being on a corresponding curve with the curved portion of the recess, said wheel being provided with a peripheral shoulder for engagement with a pawl, a pawl adapted to be engaged with and disengaged from said shoulder, a plate attached to said pawl for covering the upper opening of the recess, and a coupling link; substantially as set forth.

In testimony to the foregoing I have hereunto subscribed my name in the presence of two witnesses.

THOMAS P. BEADLE.

Witnesses:
RUFUS SCOTT,
JOHN BECK.