

(No Model.)

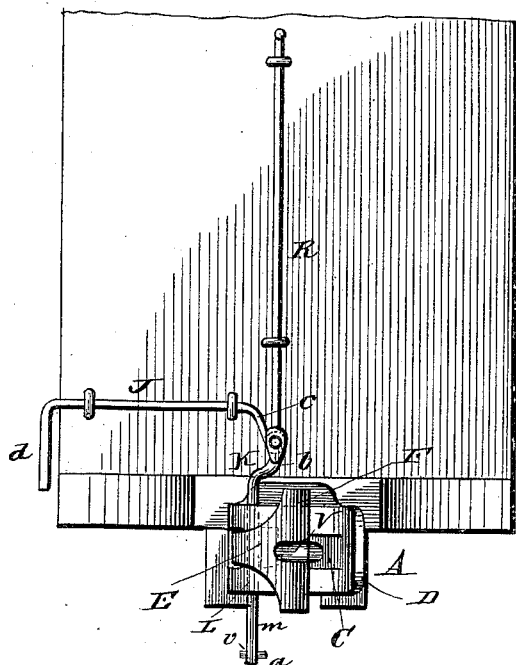
R. H. DOWLING.

CAR COUPLING.

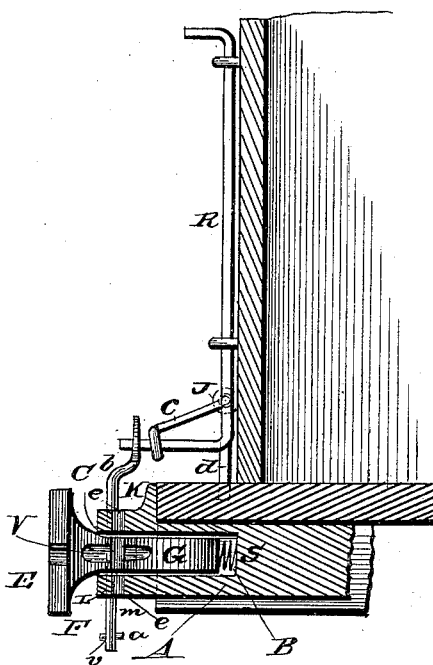
No. 306,326.

Patented Oct. 7, 1884.

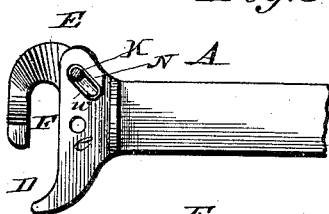
*Fig. 1.*



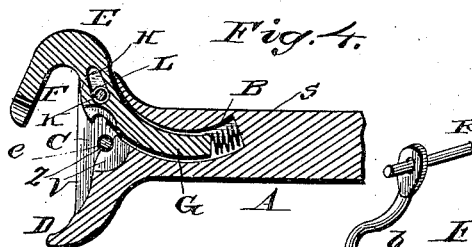
*Fig. 2.*



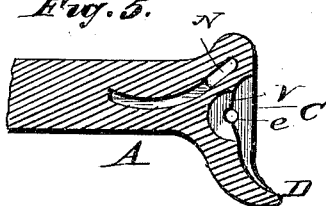
*Fig. 3.*



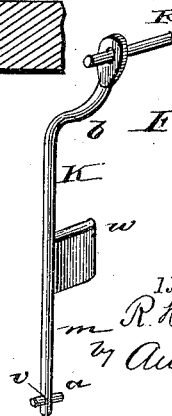
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



WITNESSES  
*R. H. Dowling*  
*E. H. Dowling*

INVENTOR  
*R. H. Dowling*  
*by Anderson & Smith*  
his  
Attorneys

# UNITED STATES PATENT OFFICE.

ROBERT H. DOWLING, OF NEWARK, OHIO, ASSIGNOR OF ONE-HALF TO  
CHARLES H. FOLLETT, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 306,326, dated October 7, 1884.

Application filed April 18, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT H. DOWLING, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a front view of my device. Fig. 2 is a vertical sectional view of the same, and Figs. 3, 4, 5, and 6 are detail views.

This invention has relation to car-couplings; and it consists in the construction and novel arrangement of devices, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter A designates the draw-head, the shank of which may be seated in bearings of the car in the usual manner. The draw-head is cast with an arch-shaped socket, B, extending into it longitudinally and its cross-section rectangular, the plane of the curvature of the socket being horizontal. The mouth of the socket opens somewhat laterally into the mouth C of the draw-bar, which is cast open at one side. On the other side the face of the draw-bar is formed with a curved guide-flange, D, extending forward.

E represents the coupling-hook, the catch F of which faces inward to engage the catch of the coupling-hook or the opposite draw-head when the cars are being coupled. This coupling-hook is formed with an arc-shaped stem, G, which fits neatly but easily in the arc-socket of the draw-head, and moves therein inward and outward in the curved path of the socket in such a manner that in closing or coupling, the catch end of the hook is drawn toward the center as well as rearward, and in opening or uncoupling, the hook head or catch is pushed outward and laterally away from the center. Through the stem of the hook, which is rectangular in cross-section, is made a slot, H, extending vertically, and designed

to afford passage to the vertical slide-key K, which connects the hook of the draw-head. In the floor of the draw-head is made a perforation, L, to provide a bearing for the round lower portion, *m*, of the key K. In the top of the draw-head is made a slot, N, into the socket to provide a bearing for the broad upper or winged portion, *w*, of the key. When the coupling-hook E is in its closed position, or pushed inward, the slot H is immediately below the slot N in the top of the draw-head and registers therewith, so that the winged portion *w* of the slide-key can descend by gravitation into the slot H. In this position this winged portion *w* forms a stop, preventing the coupling-hook from moving outward or uncoupling. The coupling-hook is thus locked in the coupled position.

In the interior portion of the socket B is usually placed a spiral or other suitable spring, S, whose office is to move the hook E outward, when the stem of said hook is released, by raising the sliding key sufficiently to disengage its winged portion from the slot H.

Through the extremity of the key K is made a perforation, *v*, to receive a stop-pin, *a*, which is designed to limit the upward movement of the key and prevent it from being taken out of its bearing and lost. The upper end of the slide-key is bent or cranked somewhat, as shown at *b*, and is connected to a projecting portion of a slide-rod, R, which extends to the top of the car or to such other position above the platform as to be within convenient reach.

By means of a transverse operating-rod, J, extending from the side of the car and having crank ends *c* and *d*, the slide-key can be operated from the side of the car when necessary.

In this coupler it will be perceived that the coupling-hook is on one side of the front of the draw-head and the guide-flange D on the opposite side. The opposite coupler is provided with the same part similarly arranged. When the draw-heads come together the guide-flanges press the hooks inward to engage each other, and when in engaged position the slide-keys fall, locking them together. When the slide-keys are raised, the hooks are moved outward and forward to uncoupled position.

In order to prevent the coupler from acting when it is not desired, the slide-key should be

raised sufficiently to free its wing from the slot N and then turned laterally, so that said wing rests on the top of the draw-bar.

5 In order to set the coupler, the winged portion of the slide-key is introduced into the slot N, so that it rests on the top of the stem of the hook.

The caught end of the hook may be centrally notched at V to admit a common link 10 for connection with a pin, z, which may be passed through perforations e in the top and bottom of the mouth of the draw-head.

Having described this invention, what I claim and desire to secure by Letters Patent, 15 is—

1. A draw-head having an arc-shaped socket and a coupling-hook having an arc-shaped stem engaging said socket, and provided with a slot to receive a slide-key, substantially as 20 specified.

2. A draw-head having a hook-head on one side of its front and an arc-shaped socket to

receive the hook-stem, and on the other side of the front a forwardly-projecting curved guide-flange, substantially as specified. 25

3. The combination, with a draw-head having an arc-shaped socket, a slot in its top extending to the socket, and a perforation in its bottom extending therefrom, of the slotted stem of the hook, and the slide-key having a wing adapted to engage the slots of the draw-head and hook-stem, substantially as specified. 30

4. The combination, with the slotted draw-head and the slotted arc-shaped stem of the hook working in a socket of said draw-head, 35 of the winged slide-key having a cranked upper end and vertical transverse operating-rods, substantially as specified.

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

ROBERT H. DOWLING.

Witnesses:

JAMES E. LAWHEAD,  
S. E. RHOADS.