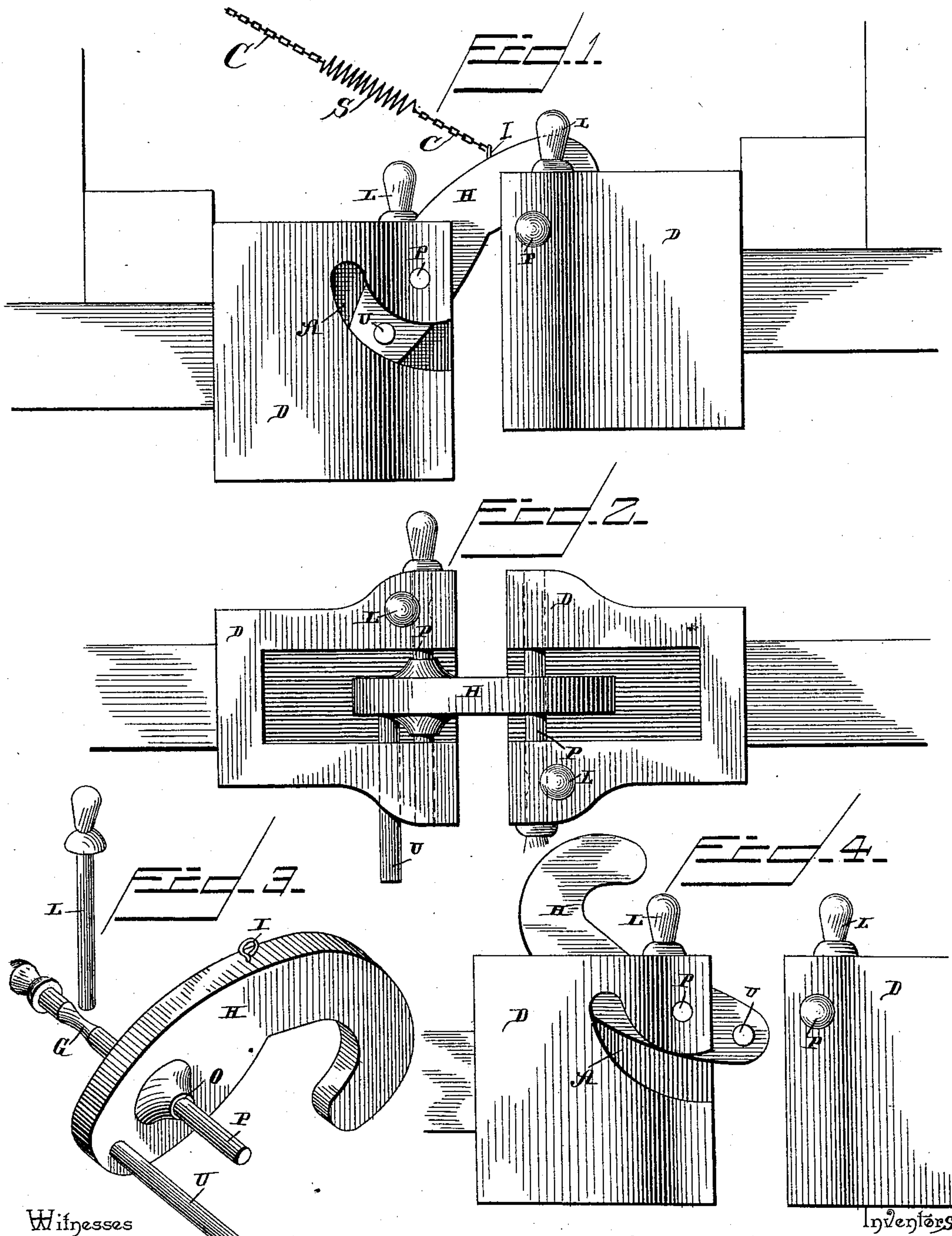


(No Model.)

W. HICKMAN & H. C. SPINDLE.  
CAR COUPLING.

No. 453,478.

Patented June 2, 1891.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIE HICKMAN AND HENRY C. SPINDLE, OF CHERRY CAMP, WEST VIRGINIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 453,478, dated June 2, 1891.

Application filed February 7, 1891. Serial No. 380,602. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIE HICKMAN and HENRY C. SPINDLE, citizens of the United States, residing at Cherry Camp, in the county of Harrison and State of West Virginia, 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 "hook-and-catch;" and the object of the same is to effect certain improvements in car-couplings of this character.

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

Figure 1 is a side elevation of two draw-heads of our improved construction slightly out of horizontal alignment and coupled together. Fig. 2 is a plan view thereof. Fig. 3 is an enlarged perspective detail of the hook, its pivot-pin, and the locking-pin slightly separated. Fig. 4 is a side elevation of the draw-heads about to be coupled.

Referring to the said drawings, the letter D designates the draw-head, having an open top and provided in one side with an arc-shaped slot A around a transverse perforation, within which is detachably seated a pivot-pin P, standing in a horizontal plane through the draw-head near its upper front corner. This pin has an annular groove G near one end, and when in position this groove stands adjacent, or rather partly in the path of, a vertical locking-pin L, detachably seated in a vertical hole in one side of the draw-head. By this means the pivot-pin P is prevented from becoming displaced, although it is permitted to turn axially within its seat.

The letter H designates a hook, through whose shank is an opening O, adapted to receive the pivot-pin, and projecting laterally from the rear end of this shank is an uncoupling-pin U, which moves within the arc-shaped slot A. When the two draw-heads are coupled together, and it is desired to uncouple them, this pin is moved downwardly and forwardly around the pivot-pin P, whereby the front end of the hook is lifted out of position and the two cars are uncoupled. In Fig. 4 is shown the normal or uncoupled position of

parts, and when the draw-heads are brought together, with the parts standing in this position, the front end of the empty draw-head strikes the pin U, drives it to the rear, and causes the hook H to turn forwardly on its pivot and engage the pin P in the empty draw-head.

What we mean by "empty draw-head" is the draw-head without the hook in it. This hook, it will be understood, is adapted to be moved from one draw-head to another by first raising the locking-pin L, then withdrawing the pivot-pin P, on which the hook is mounted, and then reversing the operations to pivot the hook in the other draw-head. The latter of course have their arc-shaped slots A all in one side, as the right-hand side, so that when the hook is removed from one draw-head and turned around to be inserted in the other the uncoupling-pin U will properly engage the slot therein. The use of the locking-pins L prevents the pivot-pins P from displacement, which might occur in the jar and rattle of railway travel; but at the same time said pivot-pins are permitted to turn slightly in the transverse perforations in the draw-head within which they are seated, and this turning prevents the cramping of the hooks should the latter stick and fail to turn around the pivot-pins.

This improved coupling permits the draw-heads to be coupled together when they stand at different heights, as shown in Fig. 1, and the narrowness of the hook with relation to the breadth of the openings in the draw-heads permits considerable lateral movement and twisting of parts, as is necessary in rounding curves.

We do not limit ourselves to the exact details of construction herein described and shown, as various changes may be made therein without departing from the spirit of our invention.

In some cases we attach a chain C to an eye I in the top of the hook H, which chain is connected to a spring S, and from the other end of said spring S leads another similar chain, which is connected to some portion of the car-body, all as best seen in Fig. 1. With this construction, when the draw-heads D are forced together, so that the pin P within the



empty draw-head disengages the tip of the hook, the contractile force of the spring S will raise said hook and automatically uncouple the cars, provided the upper chain has  
5 been drawn upon before the draw-heads come together, so as to stretch the spring. This device will also serve to hold the hook suspended when it is not desired to use the car-coupling above described, and any suitable  
10 means (not shown) may be employed for holding the upper chain C when drawn upwardly.

What is claimed as new is—

1. In a car-coupling, the combination, with a draw-head having a transverse perforation  
15 and an arc-shaped slot in one side around said perforation, of a hook within the draw-head, an uncoupling-pin at the extremity of the shank of said hook moving in said slot, and a pivot-pin through said perforation and hook,  
20 as set forth.

2. In a car-coupling, the combination, with a draw-head having a transverse perforation, of a hook within said draw-head, a pivot-pin  
25 removably inserted through said perforation and hook and having an annular groove, and a locking-pin removably seated in a vertical hole in said draw-head and normally engaging said groove, as set forth.

3. In a car-coupling, the combination, with  
30 a draw-head having a transverse perforation

and an arc-shaped slot in one side around said perforation, of a hook within the draw-head, an uncoupling-pin at the extremity of the shank of said hook moving in said slot, a  
35 pivot-pin detachably seated in said perforation and through said hook forward of its uncoupling-pin, and means, substantially as described, for preventing the displacement of said pin, as set forth.

4. In a car-coupling, the combination, with  
40 a draw-head having a transverse perforation, an arc-shaped slot in one side around said perforation, and a vertical hole in the other edge, intersecting said perforation, of a hook within the draw-head, an uncoupling-pin at  
45 the extremity of the shank of said hook moving in said slot, a pivot-pin detachably seated in said perforation and through the hook forward of its uncoupling-pin, said pivot-pin having an annular groove, and a locking-pin  
50 removably seated in said vertical hole, as hereinbefore set forth.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in presence of two witnesses.

WILLIE HICKMAN.  
HENRY C. SPINDLE.

Witnesses:

STEPHEN ROGERS,  
JOHN F. DAVISON.