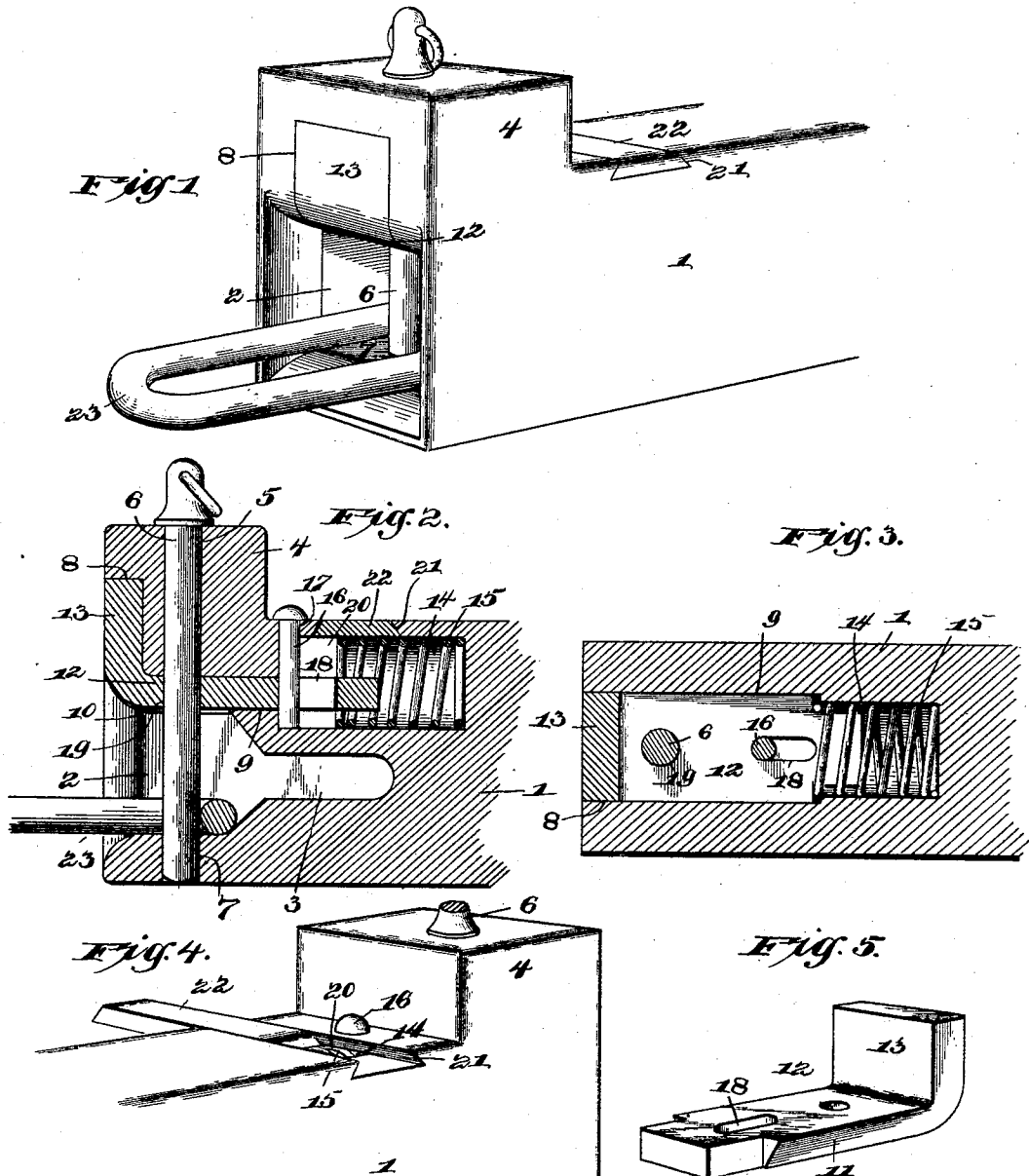


(No Model.)

F. H. HITCHCOCK.
CAR COUPLING.

No. 526,128.

Patented Sept. 18, 1894.



Inventor

Witnesses

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FRANKLIN H. HITCHCOCK, OF GREAT BEND, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 526,128, dated September 18, 1894.

Application filed December 11, 1893. Serial No. 493,366. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN H. HITCHCOCK, a citizen of the United States, residing at Great Bend, in the county of Barton and State of Kansas, have invented a new and useful Railway-Car Coupler, of which the following is a specification.

The invention has special reference to that class of car couplings wherein a slidable pin-support is provided and adapted to support the pin prior to the coupling operation, and to be pushed from under the same concurrently with said operation, thereby allowing the pin to drop into engagement with the link and to couple the cars; and the invention consists in certain peculiar features of construction attending the pin-support and the draw-head of the coupler, whereby the efficiency and general usefulness of the device is increased.

In the accompanying drawings: Figure 1 represents a perspective view of a car coupler constructed after the manner of my invention; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a horizontal section taken through the pin-supporting plate; Fig. 4, a detail perspective, illustrating the opening in the draw-head for permitting the insertion of the plate-actuating spring, and the slide for closing such opening; Fig. 5, a detail perspective of the pin-supporting plate.

The reference numeral 1 indicates the draw-head, which is formed of cast metal and provided with the link cavity 2, such cavity being connected with the horizontal slot 3, which is arranged at the rear end of the cavity 2 and which is adapted for the reception of the end of the link during the coupling operation, and as will better appear hereinafter. Formed at the upper front side of the draw-head, and rising vertically therefrom, is the enlargement 4, which is provided with the opening 5, adapted for the passage of the coupling pin 6, while the opening 5 is arranged directly above and in alignment with the opening 7. The opening 7 is formed in the lower portion of the draw-head, and has for its purpose to receive and hold the corresponding end of the pin 6. The enlargement 4 is provided on its front face with the square cavity 8, which is of a size slightly less than the size of the enlargement,

and which communicates at its lower side with the horizontally and longitudinally extending passage 9. The passage 9 is provided with the inwardly and downwardly sloping sides 10, which form practically a dove-tailed slot, and which are adapted for the reception of the correspondingly formed edges 11 of the pin-supporting plate 12.

The plate 12 consists of an integral piece of cast metal provided with a vertical portion 13, of a size equal to that of the opening 8, and adapted to lie within such opening at certain stages of the operation, while the horizontal portion of the plate is arranged to fit snugly within the passage 9, and to be capable of free longitudinal movement therein. Formed immediately to the rear of the passage 9, and longitudinally aligned therewith, is the round passage 14, which is adapted for the reception of the spiral spring 15. This spring, 15, is of the expansive class and fits snugly within the passage provided therefor, while its front end is adapted to bear against the rear end of the plate 12, and to give said plate a normal tendency outward. This tendency of the plate is restrained, and the movements thereof limited by means of the vertically-extending bolt 16, which is seated in the vertical slot 17 of the draw-head, and which projects through the passage 9, of prior mention.

The pin 16 is adapted to lie within the longitudinally-elongated slot 18 of the plate 12, so that such plate will be incapable of movement other than that permitted by the slot 18. Formed in the plate forward of the slot 18, and at such a point that when the plate is pushed as far in as possible it will register with the passages 5 and 7, is the opening 19. This opening is adapted to receive the pin 6. In order that the spring 15 be easily inserted into its passage, I provide the opening 20, which is directly connected to the passage 14, and which is of a size sufficient to permit the passage of the spring 15. Communicating with the opening 20 is a transverse dove-tailed slot 21, which is adapted for the reception of a correspondingly-shaped plate 22. The plate 22 is capable of completely filling the slot 21, and of making an even and unbroken surface on the upper side of the draw-head. Thus it will

be seen that the spring may be inserted into its opening, and secured immovably therein, by placing the plate 22 in the grove 21.

In the use of my invention the parts are assembled as described, and the spring 15 allowed to push plate 12 as far outward as the slot 18 will permit. The pin 6 should now be inserted in the opening 5 of the enlargement 4, where it will be held, owing to the vertical extent of such opening caused by the corresponding extent of the enlargement 4. The lower end of the pin 6 will now engage the plate 12 directly rearward of the opening 19, and, when the draw-heads of two cars engage in the coupling operation, the vertical portion of the plates 12 will engage each other, resulting in a rearward movement of plate 12, and in a consequent alignment of opening 19 and pin 6, whereupon the pin will lose its former support and will drop through the cavity 2 and into the opening 7 of the lower portion of the draw-head. In this movement the pin is calculated to pass through the link, numbered 23 in the drawings, and thereby couple the cars. It will be observed that by this construction the cars may be automatically coupled, all that is necessary being to insure the entry of the link 23 into the cavity 2 of the draw-head. The purpose of the horizontal slot 3 is to temporarily receive the link 23 as it is pushed forward during the coupling operation, for before the pin is allowed to drop it will be necessary for the plate 12 to be pushed into the cavity 8. This will require that the link move forward to an extent slightly greater than ordinarily, and were it not for

this slot, 3, such a movement would be impossible.

To uncouple the cars all that will be necessary will be to raise the pin 6, whereupon the plate 12 will be pushed forward as far as the slot 18 will permit, which will cause it to cut off the connection between cavities 5 and 7, and thereby support the pin as has been explained.

Having described my invention, what I claim is—

In a car coupling, a draw-head having a link cavity therein and a vertically-extending enlargement on its upper front side, said enlargement having a vertical opening adapted for the reception of a coupling-pin, a horizontally movable supporting plate arranged in the draw-head and adapted to support the pin, a pin arranged directly to the rear of the plate and adapted to operate in a longitudinally-elongated slot whereby the movements of the plate are limited, a spring bearing against the rear of the plate and operating to give it a tendency outward, the draw-head having an opening in its upper side through which the spring may be passed to effect its seating, and a dove-tailed plate operating in a correspondingly-shaped passage in the upper side of the draw-head, and adapted to close the opening provided for the passage of the spring, substantially as described.

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Witnesses:

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