

J. SHIRK.
Car-Couplings.

No. 157,701.

Patented Dec. 15, 1874.

Fig. 1.

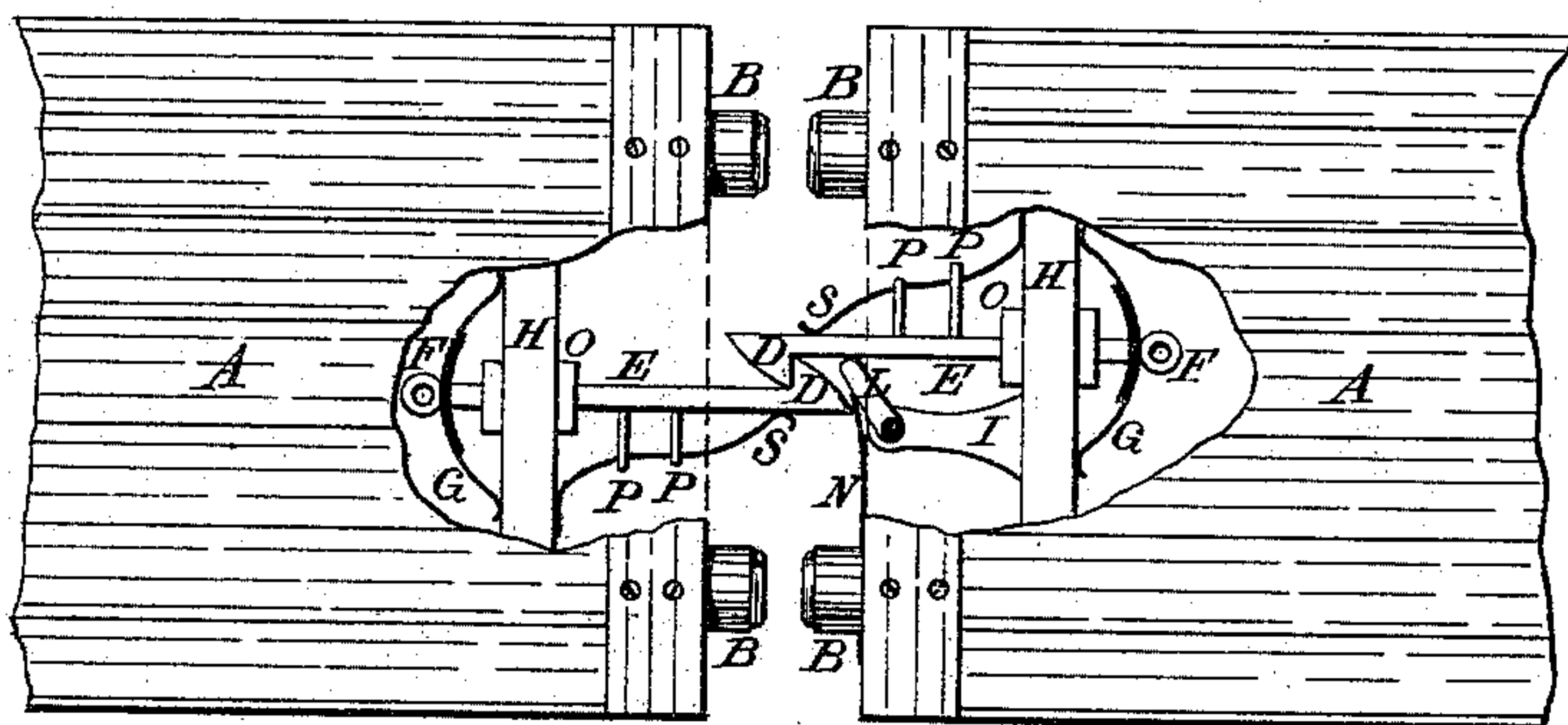
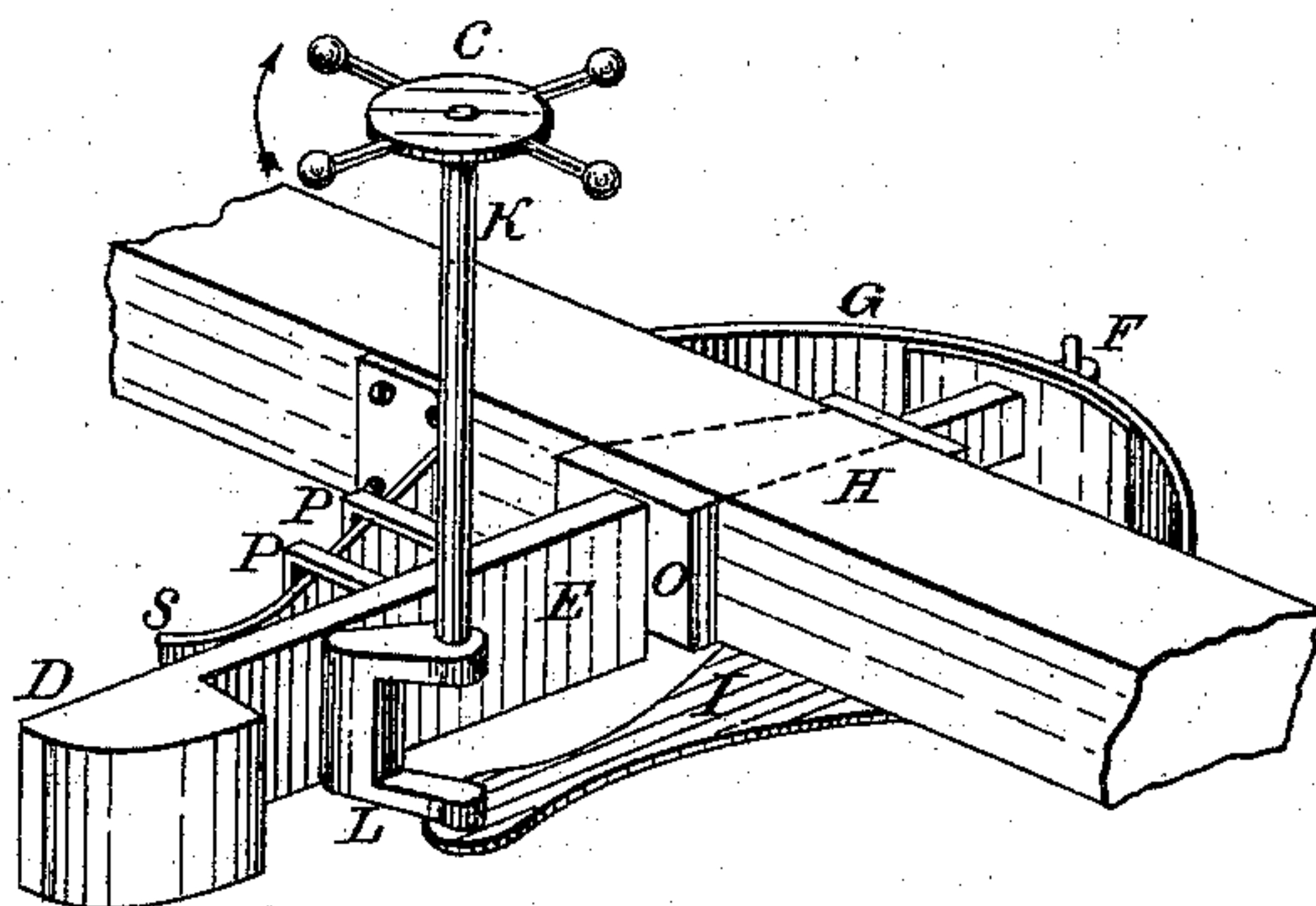


Fig. 2.



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JACOB SHIRK, OF EPHRATA, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. **157,701**, dated December 15, 1874; application filed July 28, 1874.

To all whom it may concern:

Be it known that I, JACOB SHIRK, of Ephrata, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Coupling Railway-Cars; and I do hereby declare that the following is a clear and exact description of my invention, which will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification, and in which—

Figure 1 represents a plan view, partly in section, of the under side of two trucks coupled together having my improvement; and Fig. 2 is a perspective view of the coupling device with its attachments.

Similar letters of reference indicate corresponding parts in both figures.

My invention relates to that class of car-couplings in which two hooks, actuated by springs, interlock with each other in the act of coupling the cars; and it consists in so arranging the said hooks and springs that they will only operate while the cars are on the track, but will immediately unlock automatically when one or both of the cars coupled together is thrown from off the track.

In the drawing, D represents the coupling-hook, which consists of a broad head, beveled in front, as shown, with a nearly right-angled shoulder to the shaft or draw-bar E, of which it forms a part. The draw-bar E passes through a metallic washer, O, and through the cross-timber H, beneath the floor of the truck, projecting beyond, where it passes through the elliptic springs G, the ends of which rest against the cross-piece H, while its arch presses against a stout pin, F, that passes through the rear end of the draw-bar E. The opening in the cross-piece H, through which the draw-bar E passes, is sufficiently wide to permit of the lateral motion of said draw-bar, when, in uncoupling the car, it is pressed sidewise by the lever L. S is a spring, secured to the front side of the timber H, and working against that side of the draw-bar E which is opposite to the hook D. Its play or lateral motion is controlled by the keepers P, as shown. L is a lever-key, pivoted vertically in a bearing, I, which projects in front

of the timber H, to which it is secured, under the truck, and this lever is operated from the platform, or from the roof of the car, by the rod K and wheel C. There is a spring, N, attached to the top of the platform, which works against a pin passed laterally through the rod K, for the purpose of keeping the rod and lever-key L in their proper position.

It will be readily observed that by turning the wheel C in the direction indicated by the arrow on the drawing, the side of the lever L will press against the draw-bar E, and push the spring S backward, thereby withdrawing the hook D from the corresponding hook on the next car, and the cars are uncoupled. It will also be observed that the position of the hook D and draw-bar E is, whether the cars are coupled or not, controlled by the lever L, which is again kept in the position indicated on the drawing by the spring N, working against the rod K, as already stated. But for this arrangement the spring S would have a tendency, at all times, to press the opposite hooks D against each other, so that the cars would connect, or the coupling remain intact, even if one or both of the cars ran off the track, whereas, by my arrangement, the cars will only connect as long as they remain on the track, because the lateral motion of either car in excess of the depth of the projecting shoulder of the hook D, would have the effect of slipping the hooks off each other, and the cars would become uncoupled.

If the uncoupling is not readily effected by turning the wheel C, as indicated by the arrow, (that is, operating against the side of the draw-bar E,) the wheel is swung round in the opposite direction, and the lever L is thereby brought to bear against the hook D of the opposite draw-bar. By swinging the wheel C both ways in quick succession, the uncoupling is certain to be effected, which is not always the case where a lever or windlass is employed of such construction that it can operate with the coupling to which it is attached only.

I am aware that it is not new to couple cars by spring-hooks similar to those employed in my invention; and I am also aware that levers or winding shafts have before been used for the purpose of uncoupling said hooks. I do not, therefore, claim this construction, broadly;

but I am not aware that a lever has before been used in combination with a draw-head and hook, which will operate substantially as described; and

What I claim, and desire to secure by Letters Patent is, therefore, as follows:

The combination of the draw-bar E, having

the hook D, with the spring S and lever L, substantially as and for the purpose specified.

JACOB SHIRK.

Witnesses:

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