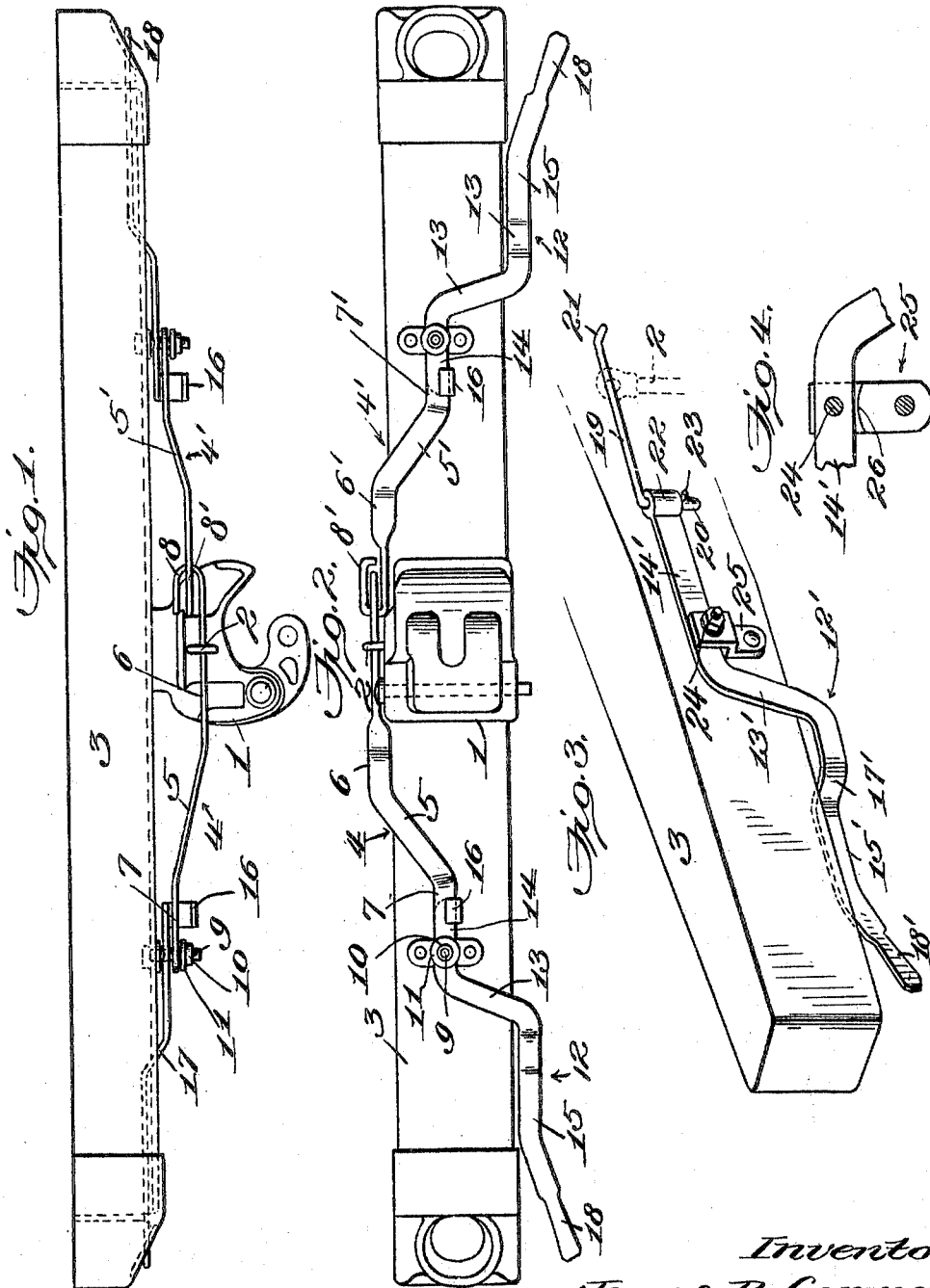


948,205.

Patented Feb. 1, 1910.



Witnesses:
Ed. Hester
W. B. Keefe

Inventor
 James R. Carmer
 By *James L. Norris*
 Atty.

UNITED STATES PATENT OFFICE.

JAMES R. CARMER, OF WILMINGTON, DELAWARE.

UNCOUPLING DEVICE FOR CAR-COUPPLINGS.

948,205.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed April 24, 1909. Serial No. 491,992.

To all whom it may concern:

Be it known that I, JAMES R. CARMER, a citizen of the United States, residing at Wilmington, in the county of Newcastle and State of Delaware, have invented new and useful Improvements in Uncoupling Devices for Car-Couplings, of which the following is a specification.

The present invention relates to uncoupling devices for car couplings, and has for its primary object, briefly stated, the improvement in certain respects hereinafter specified, of the construction set forth in my prior patent, No. 799446, granted September 12, 1905.

These improvements comprise, specifically, the production of an uncoupling device of the general type shown and described in said patent which is constructed in such a manner as to admit of its being operated by the hand or foot of a trainman from either side of the car; and the inclusion, in a device of that character, of a shifting lever so constructed as to have its free or operating end offset with respect to the body portion thereof and permanently disposed directly beneath the lower face of the sill to which it is pivoted, said end extending to the outer end of the sill, this construction, as a whole, rendering it possible for trainmen to uncouple cars without danger regardless of any unfavorable condition which might exist. Furthermore, such construction, like the patented structure, serves as a means for suspending a coupling-head or coupling in the event of the draw-bar becoming broken or detached from the car, thereby preventing the falling thereof upon or between the rails, so that the detached coupling or coupler-head will not present a dangerous obstacle to the passage of the following cars.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of the invention applied to a car-sill; Fig. 2 is a front elevation of Fig. 1; Fig. 3 is a fragmental perspective view of a modified form of the invention; and Fig. 4 is an enlarged detail view of the bracket shown in Fig. 3, a portion of the shifting lever being likewise shown.

Reference being had to said drawings, and

to the numerals marked thereon, 1 indicates, in a general manner, the coupling, 2 the locking pin employed in connection therewith and 3 the car-sill. The pin 2, above mentioned, terminates at its upper end in an eye, as is customary.

The uncoupling device, which forms the subject of this invention, is of a duplex nature, and comprises two shifting levers and two uncoupling levers arranged upon opposite sides of the coupling, the first-mentioned levers being of counterpart construction. The left-hand uncoupling lever, generally designated by the numeral 4, is formed with a central portion 5 inclined upwardly and away from the front face of the sill, and upper and lower end portions 6 and 7 which extend in parallelism with the sill face, the inner end portion 6 projecting across the top of the coupler and being reduced and bent in such a manner as to form a hook 8. The stem of this hook extends loosely through the eye of the locking pin, the connection between these two parts being in the nature of a slip-joint, the purpose of which is to allow of the necessary play of the coupling. The outer or lower end portion 7 of the lever in question is loosely mounted upon a fixed pivot 9 secured to the front face of the car-sill, the length of the pivot being such as to allow a lateral play of the lever end thereon, to compensate for the movements of the coupling. The lever end is retained upon the pivot by means of a nut 10 and washer 11, with which the pivot is provided.

The right-hand uncoupling lever 4' is similar in the main to the lever just described, the only difference being in the form of the upper or inner end portion 6', this portion being so bent as to provide an eye 8' with which the bill of the hook 8 above referred to is loosely engaged. This construction, as will be apparent, admits of the uncoupling of the knuckle when either one of the uncoupling levers is raised, the movement of the levers having the effect of elevating the locking pin 2.

The uncoupling levers 4 and 4' are operated through the medium of the pair of shifting levers 12 of counterpart construction, as above stated, for which reason the description of one applies to both. Each of the shifting levers comprises in turn a cen-

tral upwardly inclined portion 13 and upper and lower end portions 14 and 15, the portions 13 and 14 being disposed in parallelism with the front face of the sill. The portion 5 14 is provided intermediate its ends with an opening through which the pivot 9 loosely extends, and is formed at its free end with a laterally-projecting hook 16 upon which the lower end portion of the corresponding 10 uncoupling lever rests, as shown in Figs. 1 and 2, the pivoted portions of the shifting levers being interposed between those of the uncoupling levers and the adjacent face of the sill. The lower end portion 15 of each 15 shifting lever is connected with the inclined central portion 13 thereof by a laterally bent or offset portion 17 which is arranged below the plane of the lower face of the sill and projects directly inward beneath said 20 face. The entire lower or outer end portions 15 of the levers are likewise disposed beneath said face, the outer or free ends of the portions in question being themselves bent downwardly and reduced as indicated by the 25 numeral 18, thereby providing operating handles. Thus it will be apparent that by reason of the particular construction of the shifting levers, the entire operating portions thereof are disposed permanently directly 30 beneath the lower face of the car-sill, and hence these levers can be readily operated by a downward thrust of the hand or foot of a train man without the latter exposing himself to any danger, even under highly un- 35 favorable circumstances, as for instance in uncoupling from the inside of curves and during rough handling of the cars while in motion. Moreover, it is evident owing to the mutual connection of the uncoupling 40 levers, and to the connection of one of said levers to the locking pin 2, that the uncoupling of the knuckles may be effected with equal readiness from either side of the car by merely depressing the operating end 45 of the proper shifting lever. The elevation of the pin may also be accomplished by grasping the upper end portion of either uncoupling lever and raising the same, this operation being effected by the trainman 50 when the latter stands upon the sill.

In the modified form of the invention shown in Fig. 3, the uncoupling is effected from one side only of the car. The uncoupling lever illustrated in the figure above referred to is in the form of a straight rod 55 19 which passes loosely through the eye of the locking pin and has its ends 20 and 21 bent laterally in different directions. The first-mentioned end projects downwardly 60 through and below an eye 22 formed at the free end of the upper end portion 14' of the shifting lever 12', from which eye said end is held against complete withdrawal by means of a lateral pin or screw 23 with 65 which it is provided. The lever 19 is free

to accommodate itself to the various movements of the coupling owing to its loose passage through the eye of the locking pin and to the loose fit of its end 20 in the eye 22.

The single shifting lever 12' employed is otherwise identical with the shifting levers 70 12 already described, and includes in addition to the upper end portion 14' an inclined central portion 13', an inwardly extending portion 17', and a lower end portion 75 15', which latter includes an operating handle 18', the operating portion of the lever being disposed entirely beneath the lower face of the sill, as in the preferred form of the invention. This lever is pivotally 80 mounted upon a horizontal pivot 24 which extends through openings formed in the end portion 14' thereof and through the upper wing of a Z-shaped bracket 25, that portion of the bracket which connects the 85 two wings having its upper face rounded, as indicated by the numeral 26, (see Fig. 4), the purpose of such construction being to prevent wear upon the lever. The operation of the modified form of the invention is, in effect, exactly the same as that of the preferred form, for which reason specific 90 description thereof is omitted.

The inwardly extending portions 17 and 17' of the shifting levers 12 and 12' serve 95 as means for causing the uncoupling devices to suspend the couplings, in the event of the latter becoming detached from the cars, and also to suspend the coupler heads if the same break away from the draw-bar, 100 the couplings or coupler-heads on becoming detached having a tendency to pull down upon the locking pins; consequently the weight upon the inner ends of the uncoupling levers will depress the same, as a result 105 of which the inner ends of the shifting levers will be depressed and the outer or operating ends thereof elevated, the movement of the latter ends being checked by the contact of the inwardly-extending portions 17 and 17' with the under faces of the 110 sills. The portions just referred to act, therefore, as abutments, as will be understood, to sustain the uncoupling levers in position to support the couplings or coupler-heads, should the same become detached. 115

What is claimed is:

1. In an uncoupling device for car couplings, a shifting lever pivoted to the front 120 face of the car sill for swinging movement and having its outer end portion laterally offset from the remainder thereof and disposed permanently directly beneath the lower face of the sill for operation by the 125 hand or foot of a trainman.

2. In an uncoupling device for car couplings, an uncoupling lever loosely engaged with a locking pin, and a shifting lever pivoted to the car sill and having one end thereof loosely engaged with the uncoupling le- 130

ver and its other end offset laterally from the first-mentioned end and disposed permanently beneath the lower face of the sill for operation by the hand or foot of a trainman.

3. In an uncoupling device for car couplings, a shifting lever pivoted for swinging movement to the front face of the car sill and having a laterally bent portion located intermediate its ends and extending directly beneath the lower face of the sill and an operating portion disposed permanently beneath said face and forming a continuation of the bent portion, said bent portion forming an abutment adapted to contact with said lower face during the upward movement of the lever to limit such movement.

4. An uncoupling device for car couplings comprising a pair of uncoupling members pivoted to the car sill upon opposite sides of the coupler and connected with the locking pin, and an operating member connected with each of the first-mentioned members, whereby the device is rendered operable from both sides of the car, each second-named

member having its operating portion disposed beneath the lower face of the sill.

5. In an uncoupling device for car couplings, an uncoupling lever operatively connected with the locking pin, and a shifting lever pivoted to the car sill and engaged at one end with the uncoupling lever, the other end of the shifting lever being disposed permanently beneath the lower face of the car sill for operation by the hand or foot of a trainman.

6. In an uncoupling device for car couplings, a shifting lever pivoted to the front face of the car sill for vertical movement in the plane of said sill and having a laterally-offset operating portion disposed permanently directly beneath the lower face of the sill.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES R. CARMER.

Witnesses:

WILLIAM A. CRONEY,
SHELLA E. PARRIS.