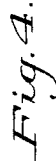


APPLICATION FILED OCT. 12, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



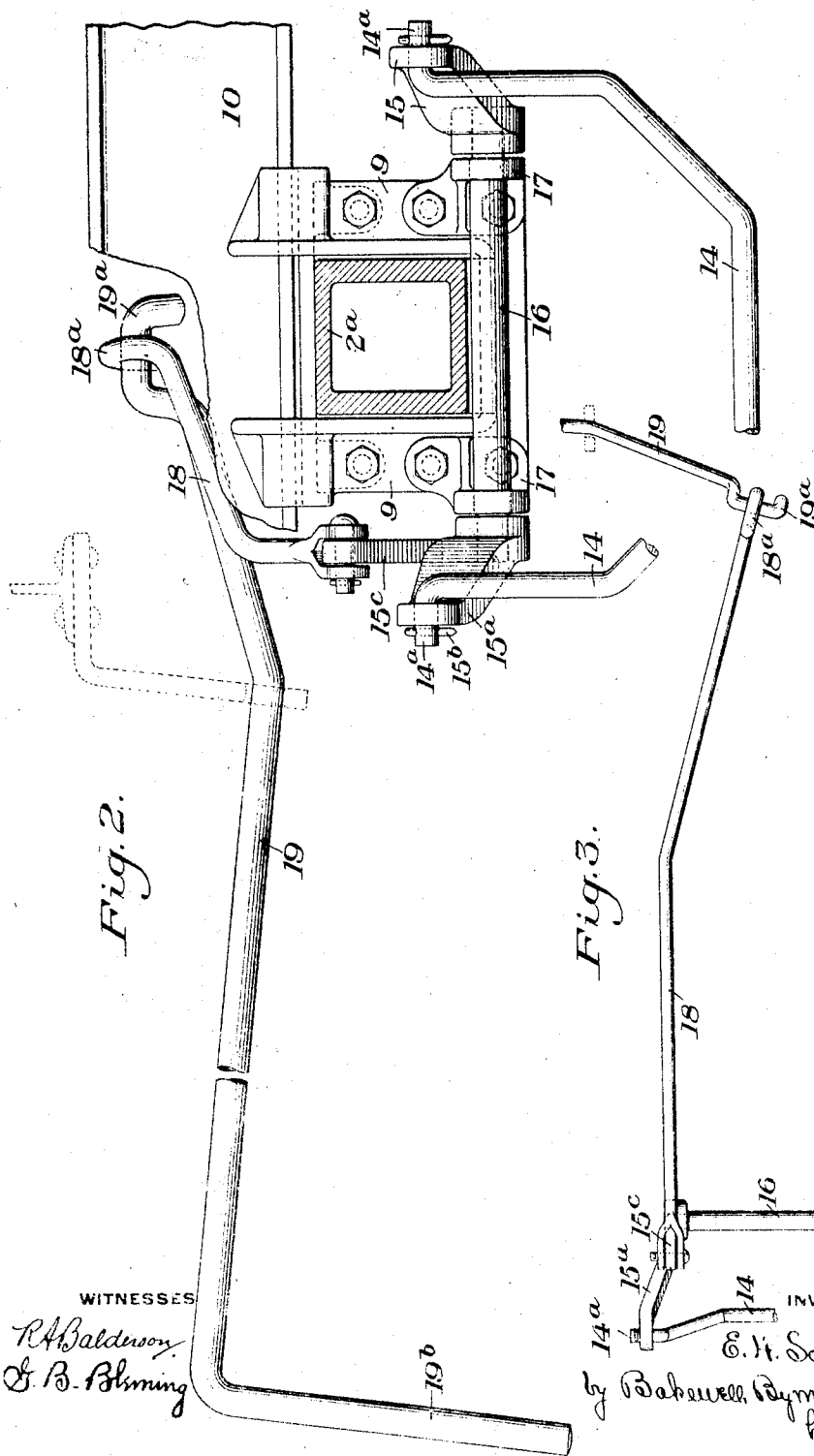
E. H. Schmidt,
by Baker, Byrnes & Parnes,
his Attys.

E. H. SCHMIDT.
 UNCOUPLING MECHANISM FOR CAR COUPLINGS.
 APPLICATION FILED OCT. 12, 1909.

1,016,854.

Patented Feb. 6, 1912.

2 SHEETS--SHEET 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ERNEST H. SCHMIDT, OF CLEVELAND, OHIO, ASSIGNOR TO THE NATIONAL MALLEABLE CASTINGS COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

UNCOUPLING MECHANISM FOR CAR-COUPPLINGS.

1,016,854.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed October 12, 1909. Serial No. 522,351.

To all whom it may concern:

Be it known that I, ERNEST H. SCHMIDT, of Cleveland, Cuyahoga county, Ohio, have invented a new and useful Uncoupling Mechanism for Car-Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

- 10 Figure 1 is a sectional side view showing my invention applied to a car coupling; Fig. 2 is a cross-section showing the uncoupling mechanism; Fig. 3 is a plan view of a portion of the mechanism; and Fig. 4 15 is a detail view of the coupler lock-lifting device.

My invention has relation to an uncoupling device for use with bottom-operating car couplers, and is designed to provide a 20 simple and effective device of this character.

The nature of my invention will be best understood by reference to the drawings, in which I have shown the preferred embodiment thereof, and which will now be described, it being premised, however, that 25 various changes may be made in the details of construction and arrangement of the parts by those skilled in the art without departing from the spirit and scope of my invention as defined in the appended claims.

In these drawings, the numeral 2 designates a bottom opening coupler having its shank 2^a rigidly attached in any suitable 35 manner to a yoke 2^b. This yoke incloses the usual draft springs 3 and front and rear followers 4 and 5 respectively. This yoke and the draft springs are slidably contained within a pocket casting 6, which is open at 40 its forward end, and which is pivoted at its rear end, so as to rotate in a horizontal plane, to a bracket or pivot casting 7, which is attached to the car structure. 8 is the pivot pin which connects the casting 7 to 45 the pocket casting 6.

The forward end of the coupler shank is supported by a movable carry iron 9 having shoes 9^a on the upper side, which are slidably supported on the upper surfaces of the 50 lower flange of an arc-shaped casting or bracket 10 depending from the car structure. The arc portion of this casting has its center coincident with the pivot point of the casting 6, about which the coupler and draft

attachment swing, so that the carry iron 9 55 has a sliding support without binding upon the tracks of the bracket 10 throughout the full arc movement of the coupler head in passing around curves.

The coupler 2, as before stated, is a coupler of the bottom-opening type, and is provided with a vertically movable locking member of any suitable type well known in the art. This locking member (not shown) is arranged to be lifted from its locking 65 position by means of a lifting piece 12. Pivoted in a slot of this lifting piece is a swinging stop member 13 having an arm 13^a at an angle thereto, to which is pivoted the short arm 11^a of the lever 11. This lever 11 70 is pivoted to the coupling at 11^b. The parts just described form no part of the present invention, except in combination with the actuating mechanism therefor now to be described. 75

Extending loosely through an eye 11^c of the lever 11, is a bail-shaped rod 14, which is placed transversely of the line of draft at substantially right angles thereto. The upwardly projecting ends of this rod terminate in short angular bends 14^a, which are loosely engaged with the end portions of two lever arms 15 and 15^a. The bent ends of the rods 14 preferably pass through openings in these levers, and are secured by 85 means of cotters 15^b, or other suitable means. The levers 15 and 15^a are rigidly mounted upon a transversely extending lever shaft 16, which is rotatably supported directly beneath the coupler shank in suitable bearings 90 provided by brackets 17 formed with or secured to the carry iron 9. The lever 15^a has cast integral therewith upon the same hub an upwardly and forwardly projecting lever 15^c, to which is connected a rearwardly 95 extending rod 18.

The rear end of the rod 18 terminates in an eye 18^a, which is loosely engaged by the bent end portion 19^a of a transverse rod 19. This rod terminates at its outer 100 end at one side of the car in the usual depending handle portion 19^b, and is suitably supported in bearings carried by the car structure. A forward pull by the trainman on the depending handle portion 19^b causes 105 the rod 19 to partially rotate in its bearings, and thus give an upward and rearward motion to its inner end portion 19^a, as will

be best understood by reference to Fig. 1. This movement draws rearwardly the longitudinal rod 18, and in so doing exerts a rearward pull upon the free end of the lever 15. This rotates the lever shaft 16, and the rotation of this shaft carries with it the forwardly projecting levers 15 and 15^a, thereby raising their forward ends and lifting therewith the bail-shaped rod 14. This, by means of the engagement of said rod with the eye of the lever 11, lifts said lever, and thereby the swinging stop and lifting piece which raises the locking member and operates the coupler. The eye 15^a is preferably somewhat elongated, as shown in Fig. 1, so that the rod 18 may be permitted to follow the swinging movement of the coupler head without binding upon the transverse rod 19, and permitting the uncoupling operation to be performed in any position of the coupler head.

Inasmuch as the pivot 8 is secured in a fixed position relative to the car frame, and the coupler with its attachment is movable relatively thereto; the distance between the vertical center of said pin and the point of connection of the bail-shaped rod 14 with the lever 11, is a variable one. The rod 14 depends substantially vertically from the free ends of the levers 15 and 15^a, so that when the coupler moves back under a compressive strain, the rod 14 will describe an arc about the centers of the connections between said rod and levers. This movement does not disturb the normal position of any of the parts of the operating mechanism, because the slight upward movement of the rod 14, due to its rotation, is compensated for by the looseness of the engagement of its horizontal portion with the eye 11^a of the lever 11. When the coupler head is drawn outwardly by a pulling force, the same conditions hold true, and the parts remain undisturbed.

It will be obvious that my invention may be used with other forms of coupler heads; that the draft gear and rigging may be of other specific forms from that shown and described; that the lifting devices may be changed as may be necessary to suit the particular form of the locking member to be actuated; and that various other changes may be made in the details of construction and arrangement of the several parts without departing from my invention.

What I claim is:—

1. In uncoupling mechanism for car couplers the combination with a laterally moving car coupler, of a lifting member, a lever for actuating said member, a bail-shaped device connected with said lever to move with the coupler in the lateral movements of the latter, and lever mechanism connected to the bail-shaped device to raise the same and thereby raise the lifting device; substantially as described.

2. The combination with a radially swinging bottom-opening car coupler, having a locking member and a lifting device, of a lever connected to said device, a bail-shaped member engaging said lever and having upwardly extending arms, a transverse shaft having levers connected to said arms, and means for operating said shaft from the side of the car; substantially as described.

3. The combination with a bottom opening radially swinging car coupler having a vertically movable lock actuating member, of a lever connected to said device, a bail-shaped element having a transverse portion engaging said lever and having upwardly extending side arms, a rock shaft carried by a part movable laterally with the coupler having levers connected to said arms, a longitudinally extending actuating rod also connected to said shaft, and means for actuating said rod from the side of the car; substantially as described.

4. The combination with a laterally moving car coupler, having a movable lock releasing member extending below the coupler head, an actuator pivotally supported at the under side of the coupler shank and having a lifting engagement with said member and having a portion extending upwardly at one side of the head, a laterally movable member in which the actuator is pivoted, a rod connected to said portion and extending upwardly and rearwardly therefrom, and a transversely extending operating rod having a loose connection with the rear end portion of the first named rod; substantially as described.

In testimony whereof, I have hereunto set my hand.

ERNEST H. SCHMIDT.

Witnesses:

CHESTER K. BROOKS,

HARRY E. ORR.