

No. 795,799.

PATENTED JULY 25, 1905.

S. W. HAYES.
DERAILER.

APPLICATION FILED DEC. 7, 1904.

Fig. 1.

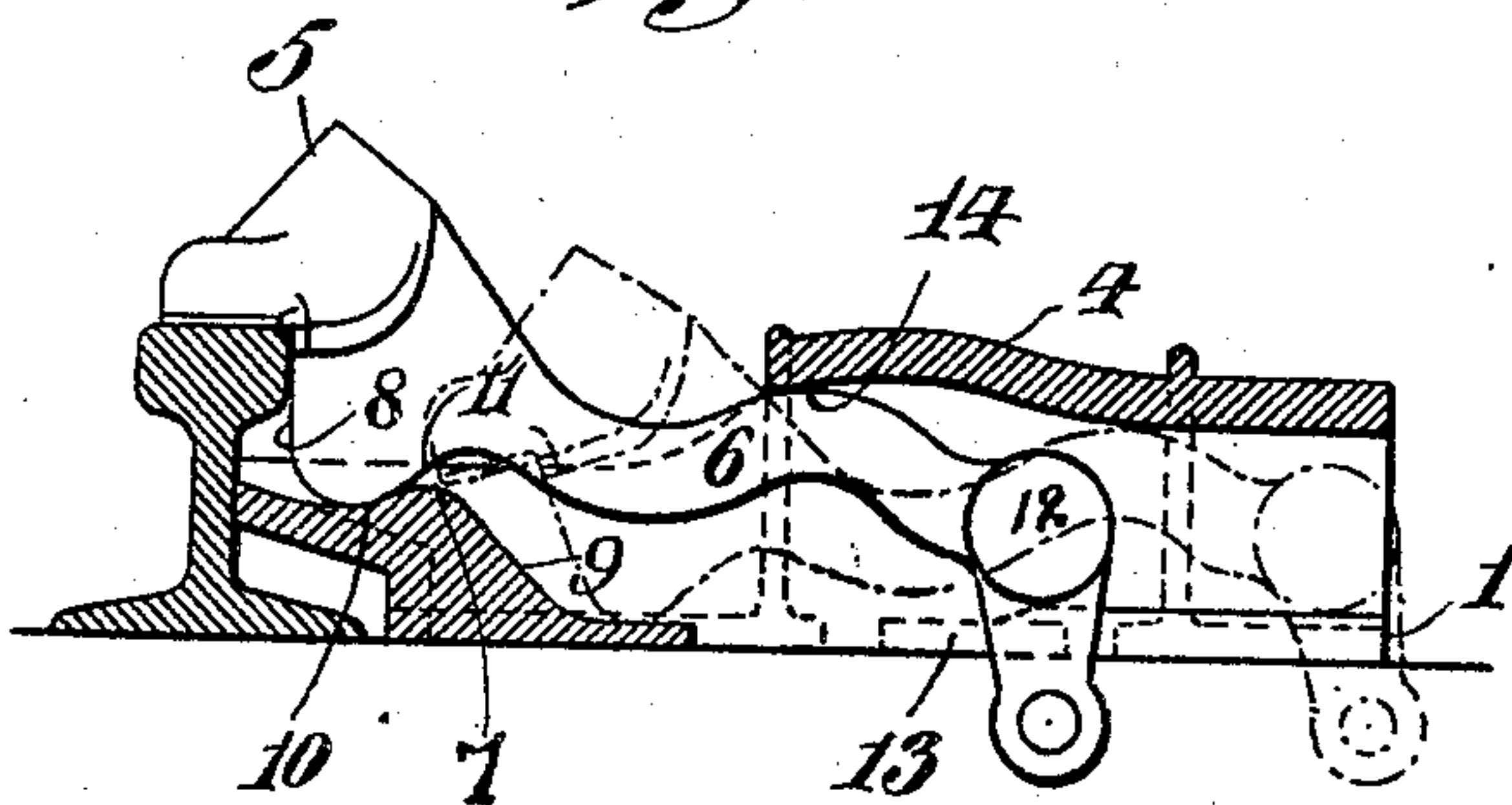
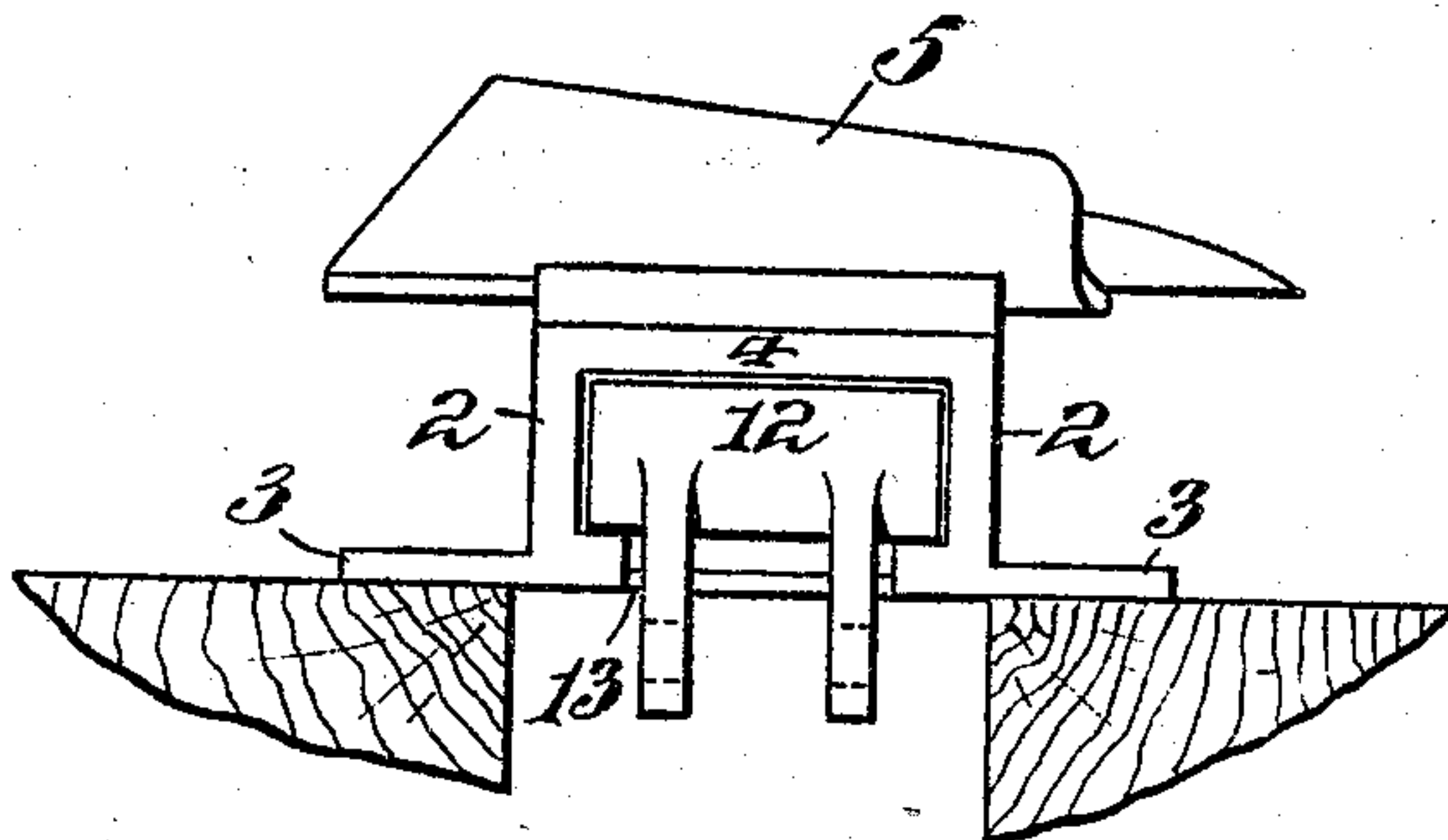


Fig. 2.



Attest:

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STANLEY W. HAYES, OF GENEVA, NEW YORK.

DERAILER.

No. 795,799.

Specification of Letters Patent.

Patented July 25, 1905.

Original application filed February 13, 1904, Serial No. 193,400. Divided and this application filed December 7, 1904. Serial No. 235,809.

To all whom it may concern:

Be it known that I, STANLEY W. HAYES, a citizen of the United States, and a resident of the city of Geneva, county of Ontario, and State of New York, have invented certain new and useful Improvements in Derailers, of which the following is a full and true specification.

This invention relates to derailleurs in which the wheel-derailing member is caused to move from a depressed position at one side of the rail to a position above and upon it, and vice versa, and the present application is a division of a former application filed by me February 13, 1904, and serially numbered 193,400.

The invention of the present application consists in certain features of construction and operation and relative arrangement of parts whereby freedom and reliability of action are insured with the greatest simplicity, economy, and efficiency, as will be fully described hereinbelow and more particularly pointed out in the accompanying claims.

Referring to the sheet of drawings forming a part hereof, Figure 1 is a longitudinal vertical section of a derailer embodying this invention with the wheel-derailing member shown in elevation, and Fig. 2 is a rear end elevation of the same device.

The standard 1 is a single casting adapted to be permanently secured to the road-bed in close proximity to the rail and formed with side walls 2, with a space between them constituting a chamber within which the wheel-derailing member is mounted to have movement toward or from the rail. The standard is also formed with side flanges 3 for attachment to the road-bed and with a floor for the chamber, upon which the derailing member is supported. The chamber may be further provided with a roof 4, partially covering the same and inclosing and confining the said member. The forward portion of the standard, which is nearest the rail and is composed of the side walls 2 and a portion of the chamber-floor, is formed of suitable proportions to extend over the base-flange of the rail, abutting against the web thereof, to serve as gages determining the proper position of the device with respect to the rail.

The wheel-derailing member comprises a derail-block 5, of usual construction, having an attached or integral arm 6 disposed within

the chamber and supported upon the floor thereof. The end of the chamber-floor nearest the rail is provided with means for giving a vertical component to the movement of the derailing member as it travels back and forth within the chamber. As shown herein, such means consists in an elevated portion of the said floor formed as a transverse rib 7, extending across the chamber between the side walls 2, and the arm 6 is provided with a shoulder 8, fitting between said walls and adapted to ride up and over the said rib. The side of rib 7 farthest from the rail and designated by 9 is sloped gently, so that the derailing member may have a free and easy ascent to the ridge thereof, and the other side 10 is shown as having even less inclination and for a shorter distance, so that a recess or seat will be provided between the extended side walls and above the rail-flange, in which the shoulder 8 may be contained when the derail-block is upon the rail and which may also share some of the strain exerted on the block by a passing wheel. The side 10, however, may be of steeper inclination or, in fact, may be vertical, if desired, so long as the back side of the shoulder 8 is sufficiently inclined or curved, as shown at 11, to permit the same to be freely withdrawn over the ridge of the rib in its backward movement.

The rearward end of the arm 6 is provided with a hub 12, which is cylindrical at its ends or otherwise formed to constitute a pivotal axis to accommodate the oscillatory movement of the forward end of the arm, as above described. This hub 12 is confined within the rear portion of the chamber and is provided with one or more operating-lugs depending through a suitable slot 13 in the chamber-floor, whereby the derailing member may be connected with appropriate operating connections. (Not herein shown.) The slot 13 extends forward a sufficient distance, as shown in Fig. 1, to permit the hub and its lugs to be moved through the forward opening of the chamber when the parts are to be disassembled. While I have shown the portion of the chamber-floor which supports the lugs as being on a level with the base of the rail and standard, so that operating connections may be attached beneath the standard—as, for example, between the ties—it will nevertheless be understood that this part may be elevated,

in which case the hub or pivotal axis of the arm will be sufficiently high to permit of attachment of the operating connections within the chamber itself. Furthermore, it is obvious that the lugs may be omitted, if desired, and the operating connections attached directly to the arm or to the hub.

The arm 6 is provided with an elbow or projection 14 within the chamber, and the inside upper surface of the roof 4 is curved in conformity with the path of movement of the said projection to serve as a retaining means, confining the arm within the chamber and insuring its proper movement as determined by the contour of the rib 7.

In operation as the derailing member is moved from the position shown by the dotted lines in a direction toward the rail the shoulder 8 rides up the inclined side 9, raising the derail-block until it reaches and passes over the ridge of the rib, whereupon the block descends and rests upon the rail in the position shown by the full lines. In this position the shoulder 8 is contained within the elevated seat formed by the extended side walls and is braced thereby against movement parallel with the rail, while the roof 4, above described, serves to hold the block against any tendency to jump from the rail under the impact of passing wheels. The shoulder 8, in addition to its function of a riding support for the derailing member, serves also as a stop, engaging the rail-head to limit the forward travel of the same. When the derail-block is withdrawn by reverse movement, it first rises slightly and then descends to its dotted-line position, in which position the block serves as a closure for the forward end of the chamber, and rearward movement is stopped by the engagement of the block with the walls of the chamber.

Having described my invention, what I claim, and desire to secure by United States Letters Patent, is—

1. In a derailer, a standard formed to provide a chamber, a floor for said chamber formed with an elevated portion adapted to give a vertical component to the movement of a member moving upon said floor, in combination with a wheel-derailing member mounted within said chamber to move upon the floor thereof toward and from the rail.

2. In a derailer, a standard formed to provide a chamber, a floor for said chamber formed at one end with an elevated portion adapted to give a vertical component to the movement of a member moving upon it, in combination with a wheel-derailing member mounted without said chamber to move toward and from the rail and provided with a part at one end engaging said elevated portion and

supported at its other end on a pivotal bearing within the chamber.

3. In a derailer, a standard formed to provide a chamber, a floor therefor having a transverse rib forming a seat between itself and the rail, and an inclined approach to said seat on the other side of said rib, in combination with a wheel-derailing member having a part adapted to ride up said inclined approach and be contained in said seat.

4. In a derailer, a standard formed as a chamber, a wheel-derailing member mounted therein to slide upon the floor thereof and a roof for the chamber serving as a retaining means confining the member to its proper path of movement therein.

5. In a derailer, the combination of a standard forming a chamber, and a derail-block arm mounted on the floor thereof to move toward and from the rail, a transverse rib on the said floor causing the forward end of said arm to move vertically and a chamber-roof confining said arm to its proper path of movement as determined by said rib.

6. In a derailer, the combination of a standard forming a chamber with an elevated portion formed on the floor thereof, a wheel-derailing member sliding over said elevated portion and an operating-lug depending from said member through a slot in said floor.

7. In a derailer, the combination of a standard-floor having a transverse rib, a derail-block arm provided with a part at one end adapted to ride over said rib and formed with a hub at the other end confined within said standard, and an operating-lug depending through a slot in the said chamber-floor.

8. In a derailer, a standard having side walls proportioned to extend over the flange of the rail when the standard is in place, a floor between said extended side walls formed as a transverse rib with a sloping side, in combination with a wheel-derailing member comprising a shoulder adapted to slide between the side walls upon said floor.

9. In a derailer, the combination of a standard-floor provided with a transverse elevated portion adapted to give an upward direction to a body moving thereon, in combination with a wheel-derailing member provided with a shoulder sliding on said floor toward and from the rail, said shoulder being adapted to serve also as a stop engaging the rail-head to limit the forward movement of said member.

In testimony whereof I have signed my name to the specification in the presence of two subscribing witnesses.

STANLEY W. HAYES.

Witnesses:

H. G. KIMBALL,
JOHN J. McELHINNY.