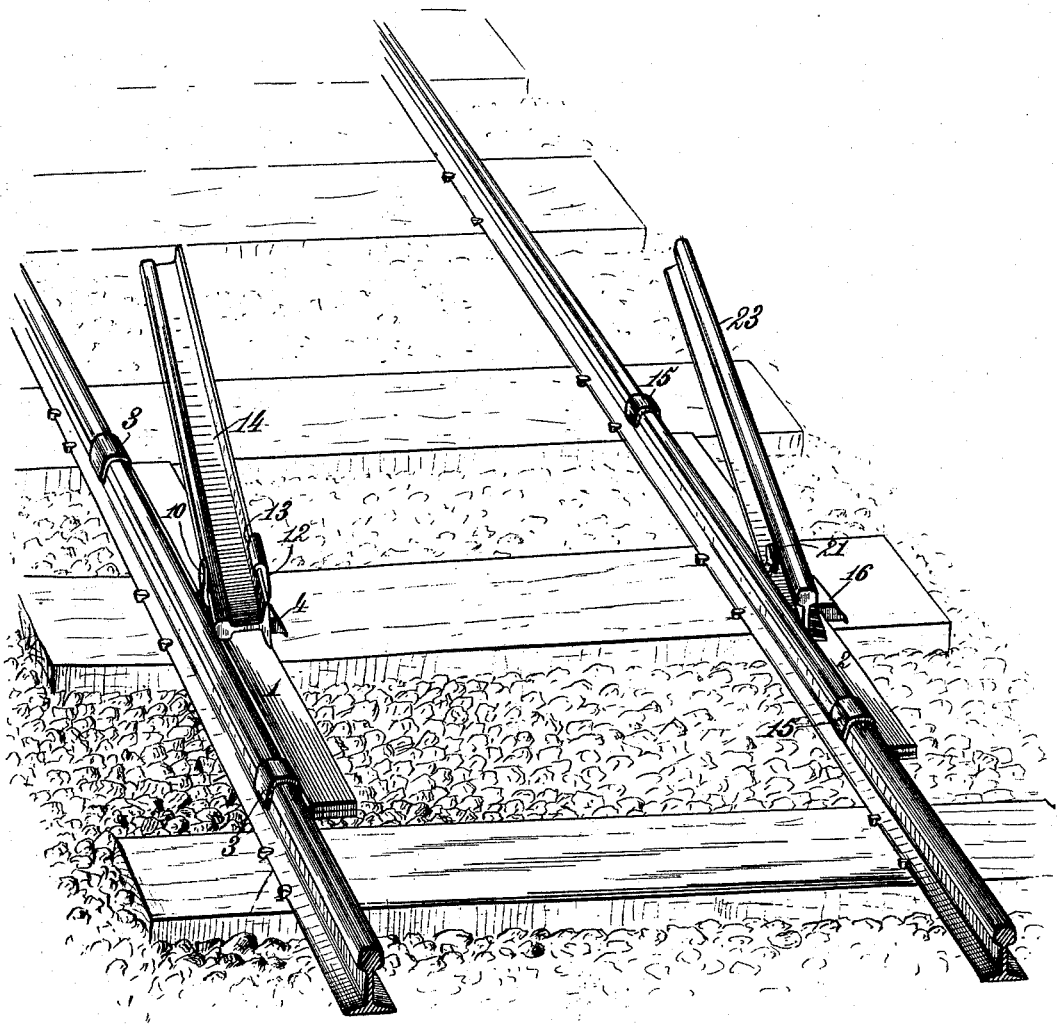
(No Model.) 2 Sheets—Sheet 1.

W. C. BOURDETTE.

WRECKING FROG.

No. 522,874. Patented July 10, 1894.

Fig. 1



Witnesses.
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Inventor:
Willis C. Bourdette.
By James L. Norris.
Atty.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

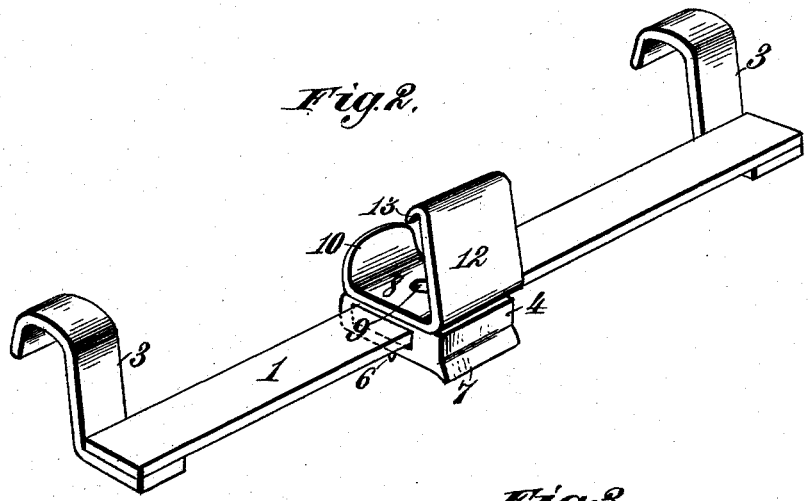


Fig. 3.

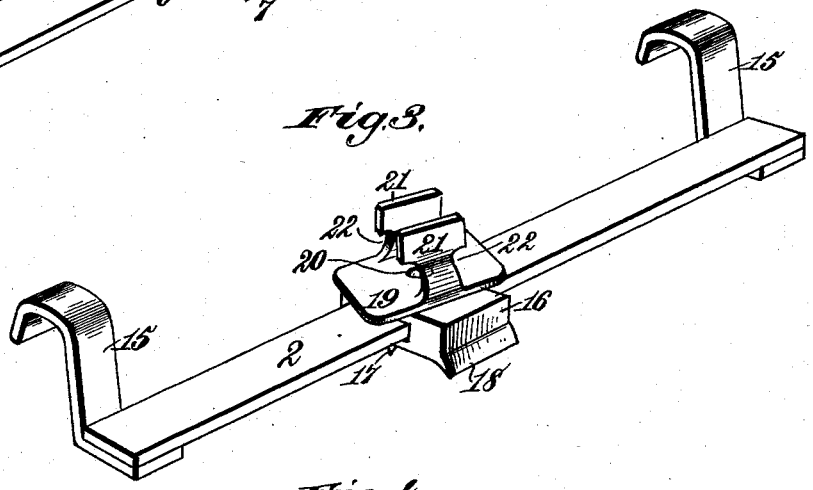


Fig. 4.

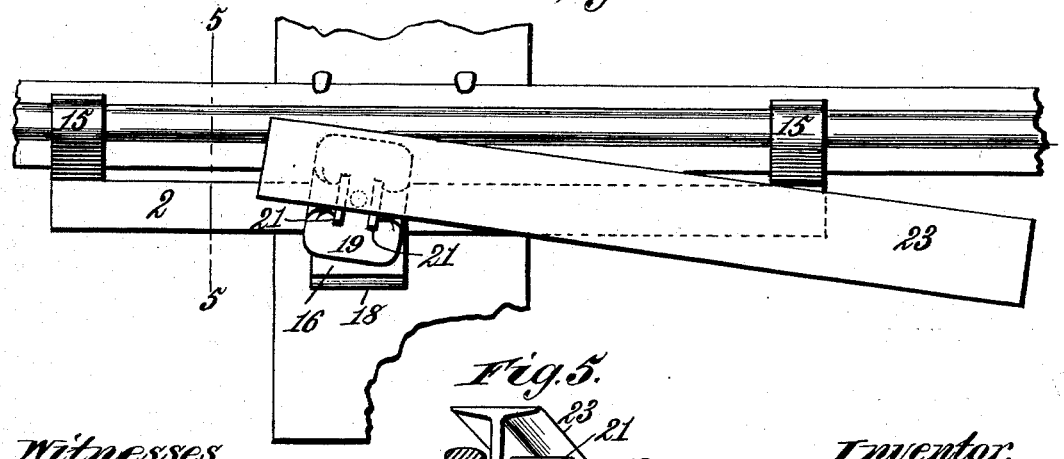
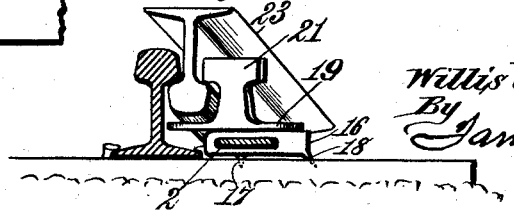


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIS C. BOURDETTE, OF GUNNISON, COLORADO.

WRECKING-FROG.

SPECIFICATION forming part of Letters Patent No. 522,874, dated July 10, 1894.

Application filed February 5, 1894. Serial No. 499,131. (No model.)

To all whom it may concern:

Be it known that I, WILLIS C. BOURDETTE, a citizen of the United States, residing at Gunnison, in the county of Gunnison and State of Colorado, have invented new and useful Improvements in Wrecking-Frogs, of which the following is a specification.

This invention relates to that type of wrecking frogs, wherein a base frame adapted to rest on a cross-tie and extend under and engage a main line rail, is provided with a rotatable shoe having standards or arms to engage a car-replacing rail section, as in the Letters Patent No. 491,005, issued to me January 31, 1893.

The object of my present invention is to provide such a construction that the base frame engages over the tread or ball of the main track rail instead of passing under the base flange thereof, whereby the practical use of the frog is greatly facilitated and it is rendered stronger and more durable, while the weight or load is more substantially and effectually sustained.

The invention also has for its object to render the pivoted shoe susceptible of sliding longitudinally on the base frame for adjusting the shoe onto a cross-tie instead of adjusting the entire frog to place the shoe over the cross-tie.

The invention also has for its object to provide the shoe base with novel, simple, and efficiet means, whereby it may be firmly engaged with the cross-tie, and be prevented from shifting or moving in any direction while the base frame is held and braced up against the main track-rail, and the pivoted shoe section can be rotated to meet the conditions required for properly setting the car-replacing rail section.

To accomplish all these objects my invention consists in the features of construction and the combination or arrangement of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view illustrating a pair of my improved wrecking frogs applied to the main track rails for replacing a derailed car or engine. Fig. 2 is a detail perspective view of the base frame and shoe designed for use at the inside of the main track rails. Fig. 3 is a similar view showing the base frame and shoe designed for use at the outside of the opposite main track rail. Fig. 4 is a detail plan view, showing a different manner of using a car-replacing rail section outside of the main track rail; and Fig. 5 is a sectional view taken on the line 5—5 Fig. 4.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the base frame designed for use at the inside of one of the main track rails; and 2 indicates the base frame designed for use at the outside of the opposite main track rail.

The base frame 1 is composed of a strong metallic bar which is flat and rectilinear, and is provided at each end portion with a hook 3 rigidly secured to the bar in any suitable manner, and so arranged that while the bar is supported by a cross-tie the hooks 3 will engage over and rest upon the treads or balls of one of the main track rails. The hooks 3 rise to the proper elevation above the rectilinear flattened bar, and they may be attached to this bar by welding, or by rivets, bolts, or other attaching devices.

The shoe of the base frame 1 is composed of two sections, a shoe-base 4, in the form of a sleeve, substantially rectangular in cross-section, the orifice through which is approximately the same form as the cross sectional shape of the flattened bar composing the base frame 1, in such manner that this sleeve or shoe base is susceptible of sliding longitudinally along the flattened bar for the purpose of adjusting it onto a cross-tie, which is a very desirable feature in the event of a cross-tie not being in the exact position where it is desired to rest the shoe base. The lower side of the shoe-base or sleeve is provided with spurs 6 for engaging the cross-tie, and thus effectually preventing the shoe-base from shifting or moving in any direction. The outer end portion of the sleeve or shoe-base is formed with a downwardly projecting sharpened flange 7, adapted to be engaged with the cross-tie for the purpose of holding and bracing the base-frame 1 up against the main track rail, and thus hold the latter horizontal in close proximity, or contiguous to the

base flange of the track rail. The other section, 8, which constitutes the shoe proper, is pivoted at or near its center to the upper side of the shoe-base or sleeve 4 through the medium of a suitable pivot pin 9; and this upper section or shoe proper is provided with an upwardly projecting flange 10, and an upwardly projecting flange 12 rising above the flange 10 and formed at its top portion with an overhanging hook 13, the construction being such that a short rail section, as at 14, can be applied to the shoe section 8 by turning the rail upon its side and causing the base flange to engage the hook 13 while the tread or ball of the rail rests against the flange 10, as will be clearly understood by reference to Fig. 1.

The base-frame 1, with its attachments, is designed to be used at the inside of a main track rail; but the base-frame 2 is adapted for use at the outside of the opposite main track rail, for the purpose of replacing a derailed car or engine.

The base-frame 2 is provided at each end portion with a hook 15, in all substantial respects the same as described with reference to the base-frame 1.

The shoe-base or sleeve 16 for the frame 2 is provided with spurs 17, and a sharpened flange 18, the same as the shoe base or sleeve 4, but the upper shoe section 19 is of a slightly different form from the upper shoe section 8, as I will now explain. The upper shoe section 19 is pivoted at or near its center to the upper side of the shoe-base or sleeve 16 through the medium of a suitable pivot-pin 20, and it is provided with a pair of upwardly projecting arms 21 converging toward each other as they rise, and cut-away at each edge portion, as at 22, so that the arms are substantially T-shaped.

The car-replacing rail-section 23 is adapted to be inserted into the shoe-section 19, so that the said rail section will stand right side up, that is, the base flange of the rail will rest upon the base of the pivoted shoe section 19 and the arms 21 will lie at opposite sides of the web of the rail.

In the practical use of the wrecking frogs, the base-frame 1 is arranged inside of one of the main track rails, and the hooks 3 are engaged over the tread or ball thereof, and the base frame 2 is arranged outside of the opposite main track rail with its hooks 15 engaged over the tread or ball of the same. The car-replacing rail sections 14 and 23 are then applied in the manner before explained, and the proper angle of these rail sections, relative to the main track rails is secured by properly shifting the rail sections, which is permitted by the pivoted shoe sections 8 and 19. In applying the base frames 1 and 2 to the main track rails, the shoes, as a whole, can be bodily shifted longitudinally along the flattened bars constituting the base frames, for the purpose of adjusting the shoes onto the cross-ties to meet the conditions required in the practical use of the devices. The wheels of the car or engine can then be caused to ascend the inclined rail sections and pass onto the main track rails in substantially the same manner as in my Letters Patent hereinbefore alluded to.

The arms 21 of the upper shoe section 19 may be of any suitable construction; but I prefer the T-shaped form illustrated, in that this enables me to use a car-replacing rail section in the manner exhibited by Figs. 4 and 5. According to this method of using the car-replacing rail section the shoe section 19 is rotated until the notches 22 in one edge of the arms 21 lie directly opposite the main track-rail, and then the car-replacing rail section is introduced by turning it upside down and inserting the tread or ball of the rail into the notches 22, so that the tread or ball of such rail section lies between the arms 21, and the web of the main track rail, whereby the base flange of the rail section overhangs, or extends over the main track rail, as will be clearly understood by reference to Figs. 4 and 5, thus enabling a car or engine to be replaced on the track when the car or engine wheels are quite near to or against the main track rails. It will, therefore, be observed that the peculiar construction of the upper shoe section 19 enables me to employ the car-replacing rail section in two different positions, by which means the wrecking frogs can be properly adjusted to meet the varying conditions likely to be encountered. When the car-replacing section is applied in the manner illustrated by Figs. 4 and 5, such rail section can lie approximately parallel with the main track rail, but the base flange of the rail section lies at an angle, so that the flange of a wheel will roll over it onto the inside of the tread or ball of the main track rail, which is very useful where the wheels are just off the main line, as before stated.

By the construction described and shown, the base frame hooks over the tread of the main track rail instead of passing under the base flange of the same, and therefore the load is more effectually sustained, and the application of the device is rendered more convenient. The sliding of the pivoted shoes along the base frames is a very desirable feature, in that the adjustment of the shoes to the cross-ties is materially facilitated, and then the shoe bases can be firmly fixed to the cross-ties by driving or forcing the spurs and flanges thereinto.

Having thus described my invention, what I claim is—

1. In a wrecking frog or car-replacer, the combination with a base frame having suitable means to engage a track rail, of a shoe slidable longitudinally on the base frame and constructed to engage and hold a car-replacing rail section, substantially as described.

2. In a wrecking frog or car-replacer, the combination with a base frame having suitable means to engage a track-rail, of a shoe

composed of a shoe-base slidable longitudinally on the base frame, and a shoe-section pivoted to the said shoe-base, and having means to engage and hold a car-replacing rail section, substantially as described.

3. In a wrecking frog or car-replacer, the combination with a base-frame composed of a bar having hooks at its ends to engage over the tread of a main track-rail, of a shoe composed of a shoe-base slidable longitudinally along said bar, and a shoe-section pivoted to said shoe-base and constructed to engage and hold a car-replacing rail section, substantially as described.

4. In a wrecking frog or car-replacer, the combination with a base-frame having suitable means to engage a track-rail, of a shoe slidable along the base frame, and provided with spurs to engage a cross-tie, and flanges to engage a car-replacing rail section, substantially as described.

5. In a wrecking frog or car-replacer, the combination with a base-frame composed of a bar having hooks to engage the tread of a main track, rail, of a shoe composed of a shoe-base slidable longitudinally on the said bar and having spurs to engage a cross-tie, and a shoe section pivoted to said shoe-base and having means to engage and hold a car-replacing rail section, substantially as described.

6. In a wrecking frog or car-replacer, the combination with a base frame having suitable means to engage a track rail, of a shoe adjustable on the base-frame and provided with projecting spurs, and a sharpened flange for holding the shoe in a fixed position on a cross-tie and bracing the base-frame against the main track-rail, substantially as described.

7. In a wrecking frog or car-replacer, the combination with a base-frame having suitable means to engage a track-rail, of a shoe having upwardly projecting arms provided at their edges with recesses 22, substantially as and for the purpose described.

8. In a wrecking frog or car-replacer, the combination with a base-frame having suitable means to engage a track rail, of a shoe composed of a shoe base slidable on the base frame, and a shoe section pivoted to said shoe base and having upwardly projecting arms provided with notches 22 at their edges, substantially as and for the purposes described.

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

WILLIS C. BOURDETTE. [L. S.]

Witnesses:
C. R. BOURDETTE,
E. E. MUELLER.