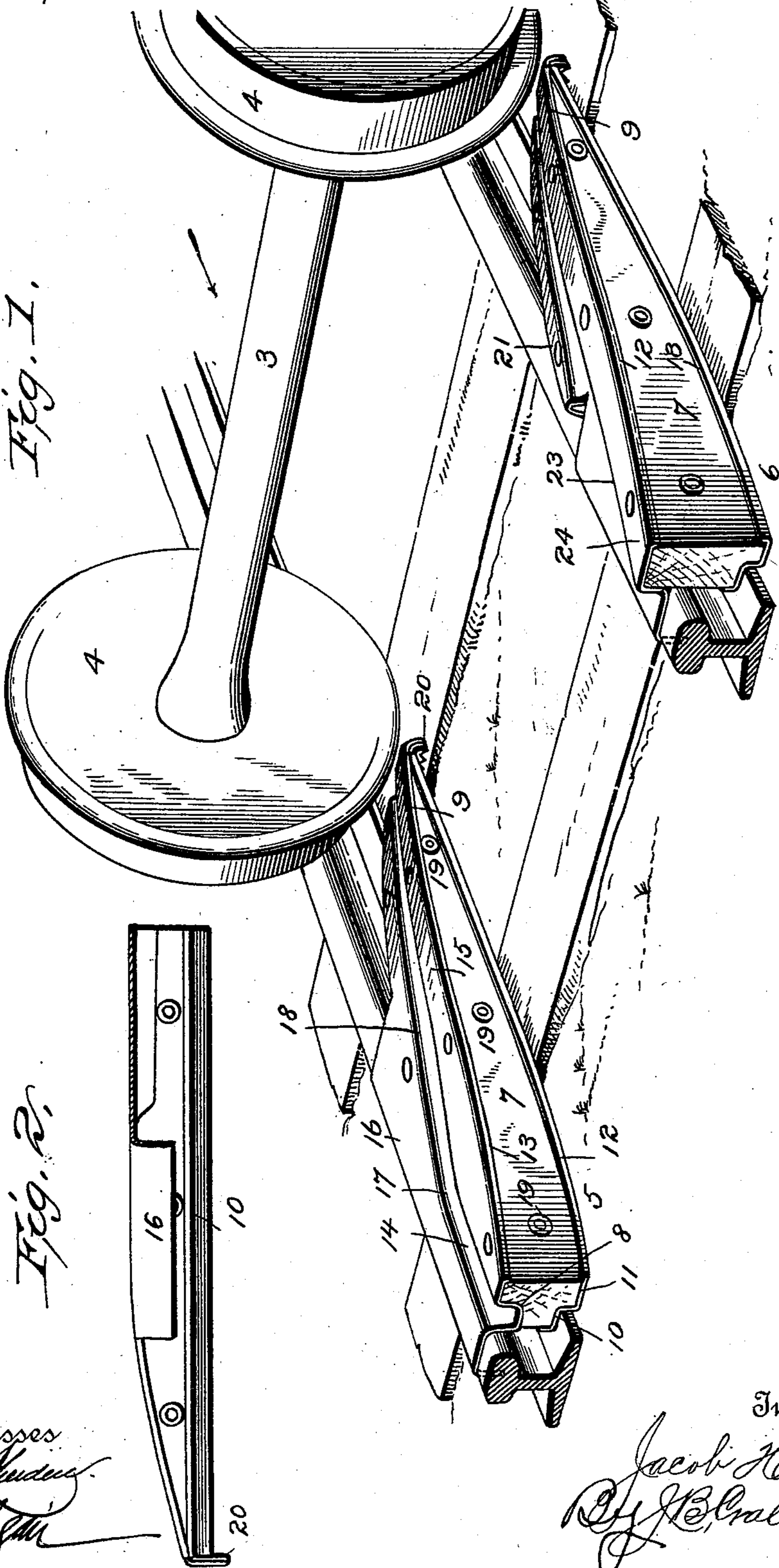


(No Model.)

J. HAAG.
CAR REPLACER.

No. 540,437.

Patented June 4, 1895.



Witnesses
[Signature]
[Signature]

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UNITED STATES PATENT OFFICE.

JACOB HAAG, OF STOCKTON, WISCONSIN.

CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 540,437, dated June 4, 1895.

Application filed August 20, 1894. Serial No. 520,780. (No model.)

To all whom it may concern:

Be it known that I, JACOB HAAG, a citizen of the United States, residing at Stockton, in the county of Portage and State of Wisconsin, have invented certain new and useful Improvements in Car-Replacers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in the construction of car-replacers, and consists of pairs of wreckers' frogs adapted to be hooked over, respectively, the right and left-hand rails, and of such construction; as will presently appear, as to positively insure the derailed cars being guided onto the rails without possibility of slipping in action.

Figure 1 of the accompanying drawings represents a portion of a railway-track with one pair of my improved wrecking-frogs or car-replacing frogs in position, with an axle and a pair of wheels in position to illustrate the operation of the device. Fig. 2 represents a side elevation partly in section.

1 represents the cross-ties; 2, the railroad rails; 3, the axle, and 4 the pair of car-wheels attached thereto.

The two car-replacer frogs, 5 and 6, shown in the drawings, are reversible; that is to say, the frog, 5, which is shown at the right-hand side in the drawings can be reversed in position and placed in connection with the left-hand rail of the track on which trains run in the opposite direction to that shown in the drawings and, similarly, the frog, 6, can be, for the same purpose, placed in connection with the right-hand rail. This will be readily understood by those acquainted with this art, or a duplicate pair, reversely positioned may be hooked to the rails if desired. The construction is the same in each case.

The right-hand frog, 5, consists of an inner block of some suitable hard wood, as oak, 7, having a central longitudinal groove, 8, in its top face, inclined outer end, 9, and on the bottom of its inner side, a longitudinal groove, 10, and a longitudinal rib, 11, along its inner side.

12 represents metallic sheathing covering the bottom of the inner wooden block, 7, and the longitudinal side groove in the bottom thereof, said sheathing being upturned at its inner edge onto the side of said block as shown to protect the block in use. This sheathing is attached at suitable points to the inner block by any suitable means, as nails, screws, or rivets.

13 represents the top metallic sheathing of the inner wooden block. This upper sheathing has a longitudinal groove, 14, corresponding with the central longitudinal groove in the inner block, a lateral raised ledge, 15, along which the rim of the wheel travels into place, and at its opposite side, a hooked lip, 16, of substantially one-half the length of the frog, said lip, as shown, hooking over the rail and thereby affording steady and secure connection between the rail and the frog. The grooves in the upper face of the inner wooden block, and in the top sheathing, it will be observed, are curved at 17 and 18 for the purpose of guiding the flange of the wheel, which runs in said groove in operation, to the side of the railroad rail and carrying the rim, or tread, of said wheel onto said rail.

The object of the longitudinal rib, 11, is to afford bearing support for the edge of the respective sheathings, and of the groove, 10, to provide a space for the flange of the rail and spikes.

The respective sheathings and the inner block are connected together by rivets, spikes, or bolts, 19.

The front ends of the respective sheathings are downturned and preferably welded together, their front edges being serrated, as at, said serrations, or teeth, biting into the adjacent tie as the wheel of the derailed car ascends the incline of the frog, thereby insuring the steadiness of the frog in use.

As shown in the drawings, the left-hand frog, 6, is of substantially similar construction to that of the frog, 5. It has a similar inner wooden block, 7, inclined front end, 9, and grooved top and bottom sheathings, 12 and 13. The flange, 21, however, constituting one wall of the top groove, which serves as a guide for the flange of the rail, does not extend as far, longitudinally, as does that in the other frog. The top groove in the frog, 6, is also

curved, at 22, to guide the flange of the wheel to the inner edge of the rail.

The operation of my car-replacing frogs will be readily apparent. On a derailed car 5 being drawn to said frogs, the impact of the wheels upon the front ends of the frogs will, by their weight, force down the serrated front ends into bite with the ties on which the frogs rest. Then, as the car is drawn forward, the 10 flange of the, for the time being, right-hand wheel will enter the groove in the top sheathing while the rim, or tread, of the wheel will ascend the incline and ride up onto the top of the frog parallel with the hook grip and 15 then, through the medium of the curvatures in said groove, the tread or rim of the wheel will be drawn along the face of the hook rail-grip and thence onto the rail. As this operation is taking place, the flange of the, for 20 the time being, left-hand wheel of the car impacts, with the rim, the front end of the for the time being, left-hand frog, forces the teeth or serrations thereof into the tie beneath, and the flange enters the groove and rides up 25 therein while the rim, or tread, of the wheel rides up the raised incline laterally of said groove, the curved flange constituting the inner wall of the groove guiding the wheel flange to and over the hooked clip and over 30 the rail gripped thereby, said guiding of the flange and rail rim of the wheel onto the rail, in this instance, being facilitated by the curvature, 23, of the flange, 24, on the sidewise extension, 25, of which the rim of the wheel 35 travels.

Supposing the drawings to represent the application of my replacer-frogs to the up-track of a railroad, by simply transposing said frogs they are equally well adapted for use on the 40 down track, as will be readily apparent.

It will be seen that by forming my frogs with extended grooves to receive and guide the respective flanges of the wheels, with broad side bearings for the rims, or treads, of 45 the wheels, and forming the grooves and their side walls with curves, as explained, the wheels will be readily raised and guided onto the

tracks without the possibility of their slipping at any portion of their transit as the wheels are held in position from the time they strike 50 the inclines until they are guided onto the rails.

In practice two pairs of frogs are hooked over the rails; one pair reversely positioned to those shown at 5, 6, and located a short 55 distance away.

I am aware of the patents heretofore respectively granted to Schreiner on the 22d day of December, 1868, numbered 85,137; Fosdick on the 30th day of October, 1883, num- 60 bered 287,528; Toombs on the 30th day of October, 1883, numbered 287,738; Fisher on the 4th day of April, 1893, numbered 494,806; Green on the 25th day of April, 1893, numbered 496,055; Mooney on the 31st day of Oc- 65 tober, 1893, numbered 507,829; and Reaney on the 30th day of January, 1894, numbered 513,531; and disclaim each of said patents severally as anticipatory of my invention herein shown and described. 70

Having thus described my invention, what I claim is—

In car replacers the central block tapering to a point having an edge adjacent to the rail, and provided with a bottom sheathing 13 fol- 75 lowing the conformation of said block and having affixed to its upper surface similar sheathing following the contour of the upper surface of said block and bent upon itself three times to form respectively the groove 80 14 adapted to receive the flange of the wheel 4 and the hooked rail grip 16, whereby the device is held fixedly to the rail, the said upper sheathing terminating forwardly in a curved, pointed, serrated end 20 to grasp firmly the 85 tie of the roadbed; the whole correlated and combined as herein shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB HAAG.

Witnesses:

R. H. BUTTERFIELD,
A. B. GILCHRIST.