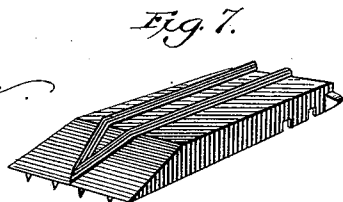
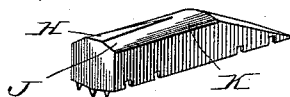
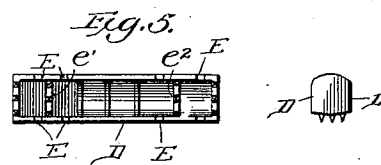
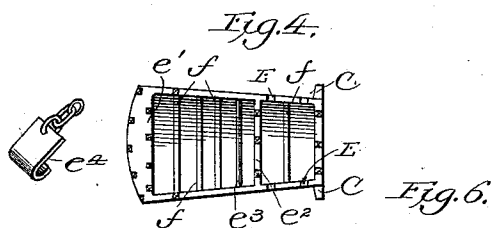
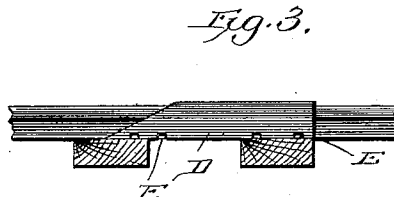
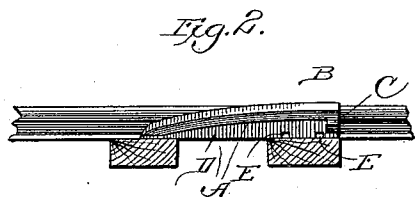
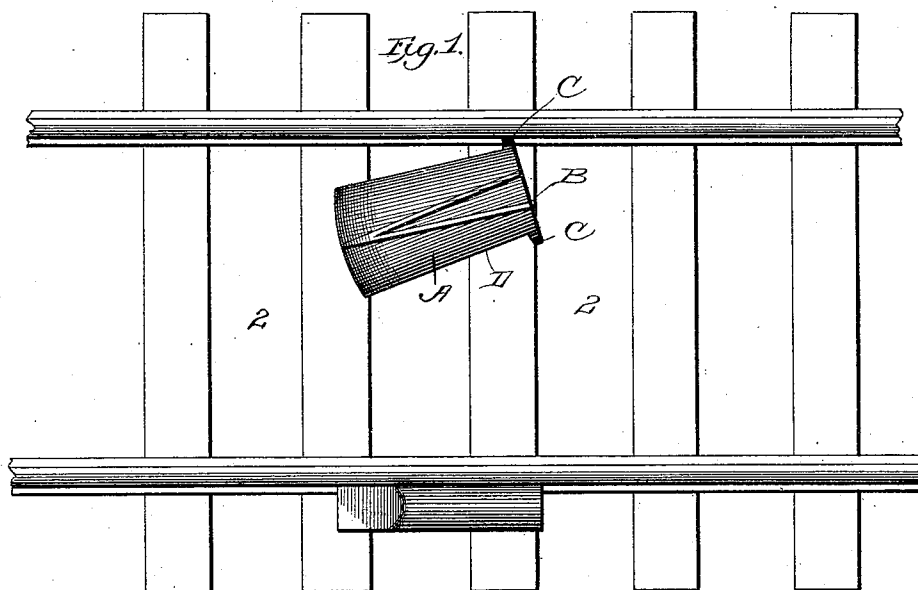


(No Model.)

J. RAGAN.
CAR REPLACER.

No. 565,506.

Patented Aug. 11, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN RAGAN, OF MULDOON, TEXAS.

CAR-REPLACER.

SPECIFICATION forming part of Letters Patent No. 565,506, dated August 11, 1896.

Application filed November 23, 1895. Serial No. 569,897. (No model.)

To all whom it may concern:

Be it known that I, JOHN RAGAN, a citizen of the United States, residing at Muldoon, in the county of Fayette and State of Texas, have invented certain new and useful Improvements in Car-Replacers; and I do hereby 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.

My invention relates to car-replacers, and it is my object to strengthen the construction and promote the efficiency of that class of car-replacers employing skids adapted for attachment to the inside and outside rail.

My invention chiefly consists in providing two novel forms of skids, one for the inside and the other for the outside rail, the former having a comparatively flat, broad rounding toe, with a gradual incline which ascends to within about one inch of the ball of the rail, and provided with deflecting-ribs adapted to deflect the car-wheels to the rail, and the latter adapted to hug closely to the outside rail and having a concavo-convex crown which rises about it and is adapted to afford means for sluing the truck in line with the track, and at the same time cause the wheels to be forced sidewise on the rails.

My invention further consists in parts and combination of parts, as hereinafter set forth.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view showing my car-replacer applied to the rails. Fig. 2 is a side elevation of the inside skid applied. Fig. 3 is a side elevation of the outside skid applied. Fig. 4 is a bottom plan view of the skid designed for the inside rail. Fig. 5 is a bottom plan view of the skid designed for the outside rail. Figs. 6 and 7 are modifications.

Referring more particularly to the drawings, A denotes the body portion of the inside skid having a broad flat toe and slight upward incline at its forward end. Said skid is provided with ribs B, which meet on the toe of the skid midway of the same and diverging from this point run back in a straight line, terminating at a point near the rear end corners. Said rear end corners are provided with shoulders C, which fit snugly the web of the rail, beveled on their under side to bear

on the base of the same and support the rear end of the skid thereon and prevent the skid sinking, especially in case the ties at this point would not afford a solid bearing. The position and formation of these shoulders allow of the ready and accurate adjustment of this skid and insure its relative height to the inside rail, which is one inch under the top of the ball or tread of the same, or a sufficient distance below to cause the tread of the inside car-wheel (which on this skid always bears on its flange) to be elevated sufficiently above the skid to allow the tread of the wheel to be above the tread of the rail. As shown in Fig. 1, the upper side of the skid is oval from front to rear, with square rear end. The toe is made flat and rounding to give it a greater bearing-surface, and the skid is made wider at this end to give the toe a greater range on the tie and allow it to take the car-wheel flange at any distance from the rail, one position for the replacer being all that is required.

The body of the skid inclines up from the toe gradually, gaining its full height about ten inches from the center of the toe. By thus decreasing the height of the inside skid the inside car-wheel (which is the first to strike a car-replacer) rolls on the toe and up the gradual incline with but very little, if any, endwise or sidewise thrust, and therefore with little, if any, tendency to displace the skid. The sides of the skid are perpendicular, as shown at D, and are provided with recesses E, which fit over the heads of the spikes, to insure a snug fit of the shoulders C.

In Fig. 4 is shown a bottom plan view of the inside skid, from which it is evident the skid has an arc-shaped crown reinforced by arc-shaped cores *f*.

*e*¹ and *e*² denote toothed cores, which are deeper than the cores *f*, and which, with the teeth under the toe, rear end, and those at the sides, engage with the ties and hold the skid in position. The toe, end, and side walls are flat or level upon their under side, and the under or bearing side of the shoulder is beveled to fit the web and base of the rail.

*e*³ denotes a metal bar secured to the side walls of the skid, which serves as means for carrying the same from place to place, and also as means for securing a clamp *e*⁴, which

is attached to said bar by a swivel-link and sister hooks or other means. Said clamp is adapted to fit under the base of the rail and serves as an additional means for holding the skid in position. It is evident that by means of the bar and link the clamp may be moored to either side of the skid and adapted to clamp the rail either from the right or left side of the skid.

10 A top plan view of the skid for the outside rail is shown in Fig. 1. The oval crown of this skid rises above the rail, as shown in Fig. 3, and is about one and a half inches higher than its side walls D, which are perpendicular. The forward end of the skid is inclined from its toe upward to its crown. It is of uniform width and hugs on the outside rail closely, its sides lying parallel therewith and rising about the height of the rail. The recesses E fit over the spike-heads to insure a close fit. A plan view of the under side of this skid is shown in Fig. 5. The under side of the toe and rear end wall are provided with teeth and are beveled at each side.

25 1 and 2 denote toothed cores, which are also beveled on each side. The purpose of said beveled sides is to allow the skid to bear on the base of the rail and tie at the same time and insure a tight fit between the sides of the rail and skid.

Fig. 7 shows a modification of the inside skid, more especially in the shape of the crown, which is flat on top instead of arc-shaped or oval.

35 Fig. 6 shows a modification of the outside skid, more especially in the shape of the crown, which instead of being oval has a V-shaped flat top H, sloping sides J, and oval at its forward end, as at K.

40 The skids are formed in one piece and are applied as shown in the drawings. The derailed car-wheels take the forward inclines of the skids. The inside wheel rides upon its flange the entire length of the inside skid, while the outside wheel after mounting the incline bears upon both its flange and tread, but chiefly upon its tread upon which it rides, (and therefore moves slower than the inside wheel.) The result of this is that as the wheels are about to take the rails the axle and car-truck are slued around nearer in line with the rails. At this point the sloping sides of the outside skid tend to force or crowd the wheels sidewise on the track. The ribs B of the inside skid bear upon the out-

side portion of the wheel-flange and deflect the wheels to the rails. This skid is lower than the rail, but as the inside car-wheel rides upon its flange the tread of the wheel is thereby elevated to about the level of the ball of the rail to which it is carried by the combined action of the ribs B and sloping sides of the outside skid. The outside car-wheel after riding up the incline on its flange is gradually forced over to the sloping side of the skid by the action of the ribs B on the inside wheel-flange. In this position the outside wheel bears upon its flange and tread, which causes it not only to move slower but to slide down the slope until its flange is forced over inside of the rail.

I claim—

1. The combination in a car-replacer of a skid for the inside of the rail having a rounded flaring toe flat upon its under side and arc-shaped upon its upper side with a gradual incline upwardly, ribs which unite at the center of the toe and diverge in straight lines to points near the rear end corners of the skid, a concavo-convex crown adapted to fall below the ball of the rail and reinforced upon its under or concave side by cores f and toothed cores e' and e'' , and perpendicular sides provided at their rear end corners with beveled shoulders adapted to bear against the web and base of the rail, and with recesses on the lower edges of its sides adapted to fit over the spike-heads.

2. The combination in a car-replacer of a skid for the outside of the rails formed in one piece adapted to lie parallel, to hug said rail, and project above the same, having a concavo-convex crown reinforced upon its under side by a series of cores formed integral therewith, and by a series of toothed cores having beveled sides, said skid having perpendicular sides provided with recesses adapted to fit over the spike-heads.

3. In a car-replacer, the combination of the concave skid, the transverse bar and a clamp adapted to be attached to said bar and adapted to clamp said skid from either side to the base of the rail.

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

JOHN RAGAN.

Witnesses:

E. M. RAGSDALE,
H. ZAVISCH.