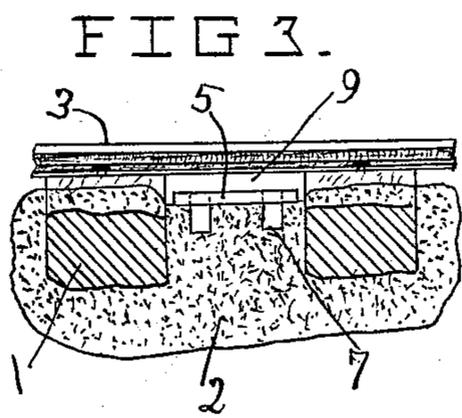
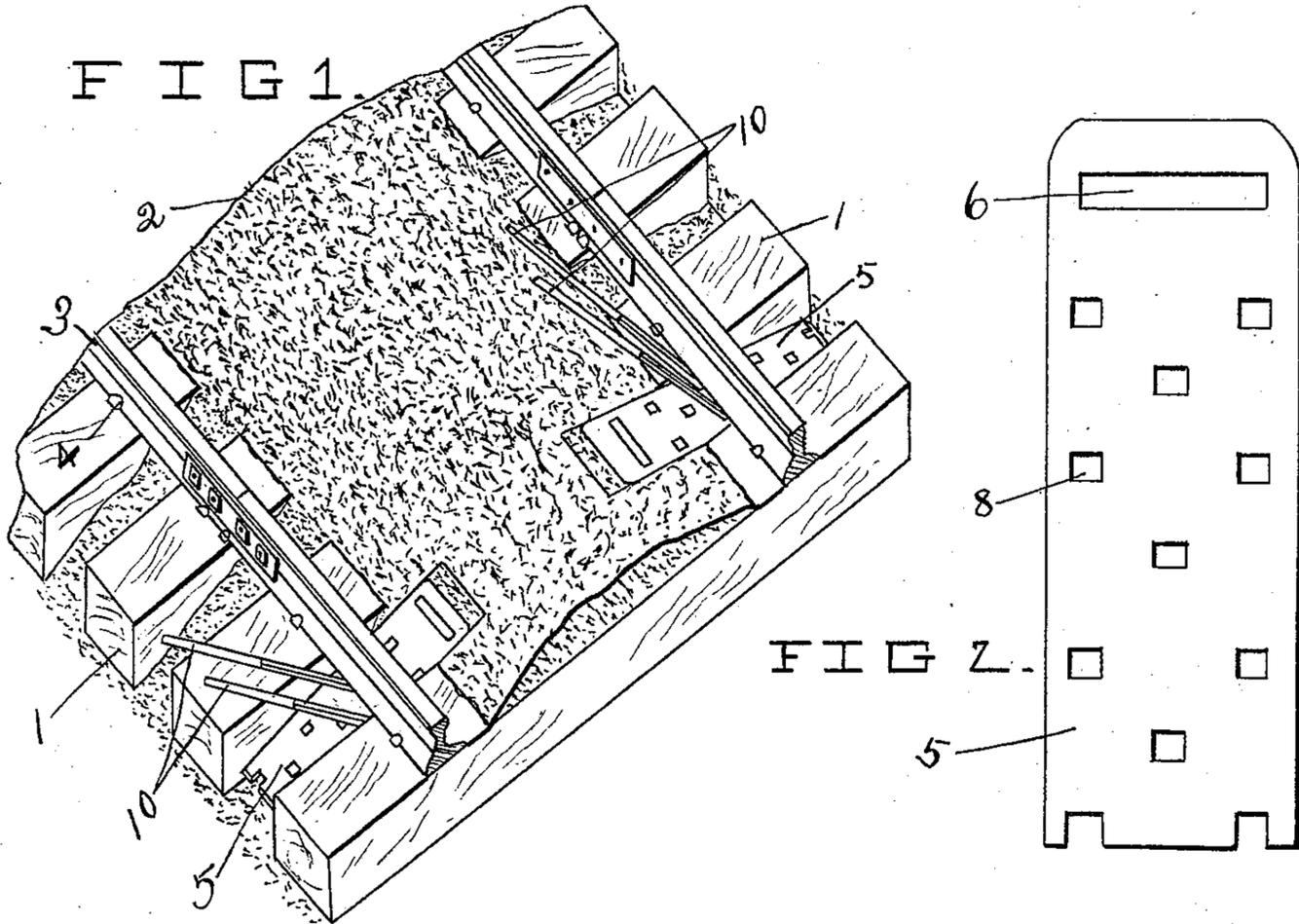


(No Model.)

D. RICHARDSON.
RAILWAY TRACK LINER.

No. 525,117.

Patented Aug. 28, 1894.



Witnesses

Geo. C. Conner.
Lela Monroe.

Inventor

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UNITED STATES PATENT OFFICE.

DAVID RICHARDSON, OF INDIANAPOLIS, INDIANA.

RAILWAY-TRACK LINER.

SPECIFICATION forming part of Letters Patent No. 525,117, dated August 28, 1894.

Application filed February 23, 1894. Serial No. 501,238. (No model.)

To all whom it may concern:

Be it known that I, DAVID RICHARDSON, of Indianapolis, county of Marion, and State of Indiana, have invented a Railway-Track
5 Liner; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures refer to like parts.

10 This invention is a track liner or mover; that is, a means for shifting a railroad track laterally in order to throw it in line. To accomplish this object it is necessary to shift
15 the rails, ties and all, and hence requires considerable power. The method which has heretofore been adopted has been for a force of about eight men with crow-bars to go along
20 the track at the points where the track needs shifting; for those eight men to place their crow-bars under the rails, say four men on each side of the track and throw the track
25 over in that manner, the crow-bars having their bearing in the dirt of the railroad bed or ballast. The amount of power which is lost by having no solid bearing on which to
30 rest the lower end of the crow-bar is very great. From the experience which I have had recently with my invention I find that three men can do the same work in this
35 direction and exercise the same power as nine could with the old method.

My invention consists in a bearing plate which I place beneath the rail between two
40 ties. This bearing plate is so constructed that it will be stationary, and by resting the lower end of the crow-bars upon this plate and especially in bearing places in its upper
45 surface, no power exercised on the crow-bars will be lost and two men can throw a track where it required six before.

The nature of my invention will appear more fully from the description and the accompanying drawings.

Figure 1 is a top view in perspective of a
45 section of railway showing my devices in place. Fig. 2 is a top view of my bearing plate. Fig. 3 is a longitudinal section of a small portion of the railway just behind the bearing plate showing the space between the
50 bearing plate and rail. Fig. 4 is a perspective view of the under side of my bearing plate.

1 are cross ties laid in the ballast.

2, and 3 are the railway rails secured to the ties by the spikes 4.

5 is a bearing plate made of any kind of metal desired and of any desired dimensions, 55 but I have been making them about eighteen inches long and nine inches wide and five-eighths of an inch thick. All that is necessary is that it be rigid enough to withstand 60 the pressure that may be brought to bear upon it. For convenience I provide a slot at 6 for the purpose of making a handle, but the handle can be made in any other manner. I provide spurs or calks 7 on the under side of 65 my bearing plate for the purpose of holding the bearing plate in place when laid on the ground. These calks should be preferably about two inches long and I have shown eleven of them but the number is immaterial 70 provided there be enough to hold the plate in place. I have made these calks heretofore as shown in the drawings by punching a tongue through the metal because it was convenient, but they may be made in any other 75 way. They may be removable or they may be cast onto the under side of the plate or otherwise secured. I have heretofore made these calks at a slight angle to the plate leaning somewhat toward the handle end, but this is 80 unnecessary and I consider straight calks preferable because then it makes no difference which way you place the plate under the rail, you can bear on it either way and not move it. By cutting the calks out, as I 85 have done, there have been left in my plate 5 some holes or apertures 8, which I have used as bearing places for the lower end of the crow-bars 10. These holes are unnecessary for the bearing places may be made by creating mere depressions in the upper surface 90 of the plate or by having ridges or corrugations across the plate between which the lower ends of the crow-bars will be held and prevented from slipping during the lift. I have 95 heretofore arranged these bearing places for the crow-bars out of line, as shown in the drawings, so that a convenient bearing place for the crow-bars can be found however the plate may be placed in relation to the rail. 100

The method of using my device consists in shoveling some of the ballast away between two ties until the rail will be about four inches above the ground. This is shown in

Fig. 3, the space being marked "9." I then slip under the rail in this place made for it my plate 5, as seen in Figs. 1 and 4. The calks 7 will enter the ground as shown in Fig. 5 3 and hold the plate in place. Then the workmen place the crow-bars under the rail with the lower ends in the most accessible bearing place and shove over the track. I show four crow-bars but two are usually sufficient to shift the track and never more than 10 four are required. The best angle at which the crow-bars should be placed is about forty-five degrees. If the plate is so located in any case that the crow-bars cannot be placed at 15 that angle, one can be placed in a forward bearing plate so as to make its angle less than forty-five degrees and the other crow-bar can be placed in a rear bearing plate so that its angle may be greater than forty-five degrees. 20 By these means the same result is attained as if both crow-bars were set at an angle of forty-five degrees. If both crow-bars should be at a greater angle than forty-five degrees there would be a tendency in the plate to slip, 25 but when one is placed at a greater angle than forty-five degrees and the other at a less angle, the latter will tend to hold the plate down and prevent its slipping. Usually a track need not be moved but an inch or two 30 or three, but if it should be necessary to move it two, three, or four inches the proper angle for the crow-bars can be attained as the shifting process goes on by changing the bearing place one notch higher. To get the best lift 35 it is desirable that the upper surface of the bearing plate be about two and one-fourth inches below the rail.

It will be observed from this description

that my invention, while simple, is one of considerable merit inasmuch as the expense 40 of keeping a railroad lined is great, and by my device judging from my experience with it, the expense will not be much more than one-third of what it has been.

Without limiting myself to the specific form 45 shown, what I claim as my invention, and which I wish to secure by Letters Patent, is—

1. A railway track liner comprising a bearing plate adapted to be seated between or adjacent to the ties, and having formed in or 50 upon the general plane of its surface shoulders or bearing points adapted to receive and serve as fulcra of an ordinary crow bar, substantially as described.

2. A track liner consisting of crow-bars, and a bearing plate provided with bearing places 55 out of line with each other laterally.

3. A railway track liner, comprising an ordinary independent crow-bar, and a bearing plate provided with holes to prevent the end of 60 the crow bar from slipping, and claws formed on the under side of such bearing plate, substantially as shown and described.

4. A railway track liner comprising a bearing plate having holes cut through it at various 65 places, calks formed on the under surface consisting of the tongues made by cutting said holes and turning the same downward, and a crow bar whose lower end is adapted 70 to rest in such holes.

In witness whereof I have hereunto set my hand this 13th day of February, 1894.

DAVID RICHARDSON.

Witnesses:

V. H. LOCKWOOD,
LELA MONROE.