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C. B. SMITHERS

2,446,495

RAIL ANCHORING MEANS

Original Filed Jan. 31, 1947

Fig. 1.

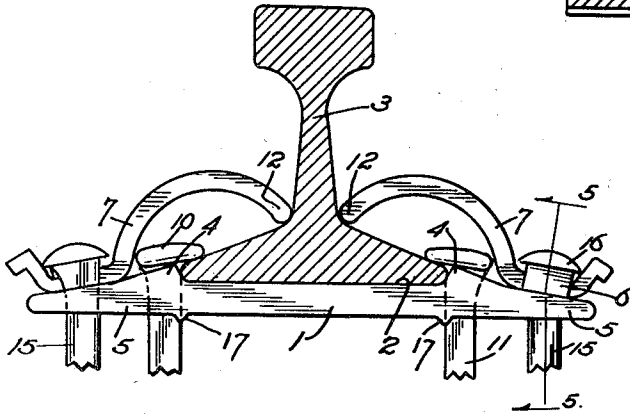
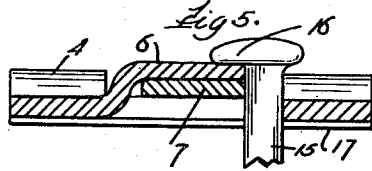


Fig. 2.

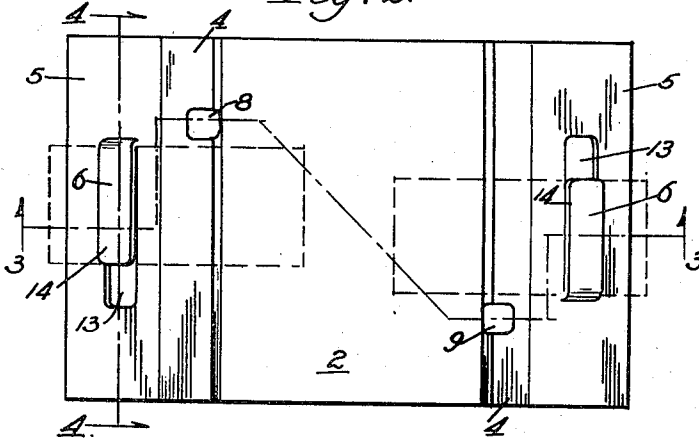


Fig. 6.

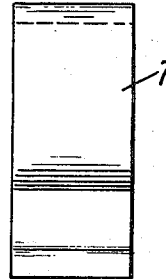


Fig. 3.

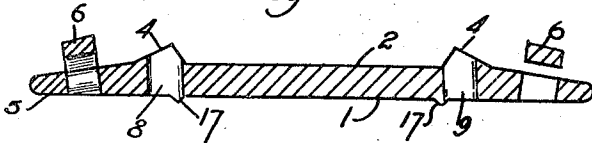
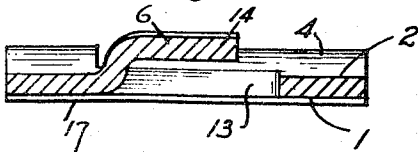


Fig. 4.



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UNITED STATES PATENT OFFICE

2,446,495

RAIL ANCHORING MEANS

Clifford B. Smithers, Chillicothe, Ill., assignor of
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Substituted for application Serial No. 725,619,
January 31, 1947. This application December
18, 1947, Serial No. 792,497

2 Claims. (Cl. 238-349)

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This invention relates to means for fastening railroad tracks to railroad ties, and more specifically to anchoring means for rails using anchor plates, and including some resilient elements for holding the rail down from each side on the plate.

This application is a substitute for the application of the undersigned bearing number 725,619 filed January 31, 1947 and which has become abandoned.

The object of the present invention is to give the anchoring means for railroad tracks a limited amount of resiliency and relieve the hold-down spikes from excessive shock loads which would normally tend to loosen them and require more frequent attention.

Another object is to supplement the usual railroad spikes with resilient holddown means to reduce their tendency to loosen unreasonably as a result of successive shock loads, as well as provide cushioning means for the rolling stock.

Other and more specific objects will appear in the course of the following detailed description of one form of anchoring means made in accordance with the present invention, having reference to the accompanying drawing, wherein:

Figure 1 is a sectional view of a rail mounted on an anchor plate, showing spikes and holddown means made in accordance with the present invention.

Figure 2 is a plan view of one form of anchor plate which may be used as a part of this invention.

Figure 3 is a sectional view thereof taken on the line 3-3 of Figure 2.

Figure 4 is a section taken on the line 4-4 of Figure 2.

Figure 5 is a section taken on the line 5-5 of Figure 1, and

Figure 6 is a plan view of one of the resilient holddown elements.

The anchor plate 1 is formed, as shown, with a groove 2 for the rail 3 to rest in, and having ridges 4 along the sides of this groove, the sides 5 of the plate beyond these ridges tapering down to the edges. Strips 6 are punched out in these sides and are offset as shown to form clamp hooks for resilient elements 7 formed, as shown, to hold down the rail 3 from each side when mounted in place.

The plate is punched out at 8 and 9 for spikes 10 and 11 respectively to anchor both the plate and the edges of the rail to the tie (not shown), in the usual manner. Obviously, more than one of these spikes 10 and 11 may be used on each side of the rail, if desired.

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These spikes are supplemented by the resilient elements 7 shaped as shown so that when mounted by slipping them under the clamp hooks 6, their ends 12 will bear with a predetermined resilient pressure on the opposite sides of the rail 3.

The width of the strips 6 and their offset is such that a portion of the punched slots 13 will be cleared by the free ends 14 of the strips 6 to provide a passage for a spike 15 to be driven there through, the lip 16 thereof overlapping the end 14 of the strip 6 to draw it down firmly over the element 7 to keep it from working out, as well as furnishing additional anchorage for the plate 1.

The plate 1 is provided with small sharp ridges 17 for embedding in the surface of the tie (not shown) and preventing any tendency to slip sideways thereon.

The elements 7 further provide holddown forces closer to the center of gravity of the rail section and are thereby more effective in cooperating with the spikes 10 and 11 to lessen the shock loads there against, by promptly pushing the rail back into a central position after each shock, to be in a position to lessen the succeeding shock, there being normally a slight clearance between the ridges 4 and the edges of the rail 3 in groove 2. Thus the tendency for the spikes to loosen is greatly reduced, and the rail provides a cushioning effect on cars rolled over it.

Obvious modifications in the form and arrangements of parts may be made without departing from the spirit and scope of the present invention, as defined in the appended claims.

What is claimed, is:

1. An anchoring plate for fixing rails on ties, comprising a groove slightly wider than the base of said rails, spike holes along the edges of said groove, offset tongues punched upwardly along the sides of said plate to form clamp hooks, resilient means for holding down said rails over their lower flanges and formed to fit under said clamp hooks, said tongues so shaped and offset as to cause their free ends to clear the ends of their corresponding slot ends sufficiently to permit a spike to be driven through said slot, with its lip turned toward the tongue so as to overlap it and draw it firmly down over said resilient hold-down means to strengthen the clamping effect.
2. An anchoring plate for fixing rails on ties, having a groove slightly wider than the base of said rails, bounded by ridges, spike holes along said ridges, spikes for holding down the edges of the lower flanges of said rails, driven through said spike holes, said plate having clamp hooks formed along its sides by offsetting upwardly tongues

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struck out of the plates, and resilient means formed to fit under said clamp hooks at the outer ends and to bear over the lower rail flanges where they meet the center section of the rail at the inner ends, wherein the tongues are so shaped and offset as to cause their free ends to clear the ends of their corresponding slot ends sufficiently to permit a spike to be driven through said slot, with its lip turned toward the tongue so as to overlap it and draw it firmly down over said resilient holddown means to strengthen the clamping effect, and spikes for said clamp hooks.

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REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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2,275,129	Cantrell et al.	Mar. 3, 1942