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T. H. M. CRAMPTON

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CROSSING

Filed June 21, 1928

Fig. 1

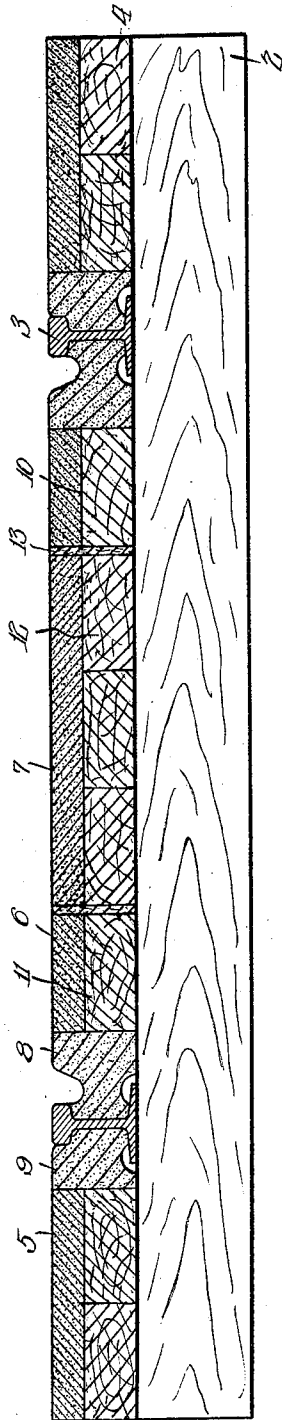
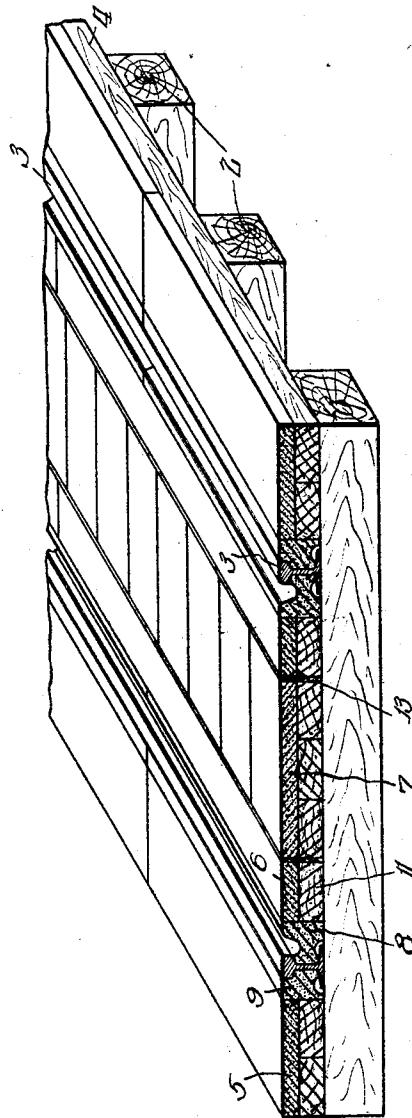


Fig. 2



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UNITED STATES PATENT OFFICE

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CROSSING

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This invention relates to crossings for use over rails, streams, ditches, and the like, and aims to provide a novel and improved composite paving over a substructure.

by causing the structure to yield as a whole to any and all stresses, to which it may be subjected.

5 The invention consists in the features, combinations and arrangements hereinafter described and claimed, for carrying out the above stated objects and such other objects as will hereinafter appear.

The decking strips are thick wooden planks laid in abutting relation except where separated by the rail fillers and other expansible joints which may be spaced at intervals. These are covered by the surfacing strips formed of fibrated bituminous material, the fiber material therein being of a linear structure to securely bond the bituminous binder.

10 Generally described, the invention comprises a crossing having a substructure over which a super composite structure is laid. This superstructure comprises a layer of decking planks secured to the substructure and overlaid with a layer of composition surfacing strips. The superstructure is coextensive in area with that of the substructure to unite all the elements into a rigid unit and prevent differential movements therebetween. Within the structure, certain sections may be conveniently formed to be readily removable from the structure, thereby giving access beneath the substructure.

That part of the construction between the rails is built up with side sections 10 and 11 separated from a central section 12 by expansion joints 13, thereby providing separate units which are readily removable to give access beneath the rails for tamping. There are no overlapping joints between the center sections, and the expansion joint is of a width to extend from the ties to the surface plane of the surfacing blocks so as to make a straight line of separation between the edges when the side sections are removed.

20 In the accompanying drawings Figure 1 illustrates a sectional view of a railway crossing embodying my invention; and Figure 2 is a perspective view of the crossing.

The side sections 10 and 11 are separated from the rails by the rail filler strips 8 which space the side units of the crossing construction from the rail. That part of the crossing structure on the outside of the rails is spaced therefrom by the somewhat similar contoured strip 9.

25 Referring to the drawings in which I have illustrated a railway crossing to typify my invention, numeral 2 designates conventional railway ties of a roadbed on which rails 3 are supported and spiked in place. Over the ties between and beyond the rails, deck planks 4 are laid parallel with the rails, and then surfaced with composition blocks 5, 6 and 7. Strips of rail filler 8 and 9 may be advantageously interposed adjacent the rails on the inner and outer sides respectively to insulate them and prevent access of water beneath the structure. These fillers are made of fibrated bituminous material molded into strips which are contoured to snugly abut the rail and the adjacent edges of the crossing structure.

The super structure comprises a compact unified covering layer over the ties and prevents all ingress of water therebeneath.

35 The novel and improved construction aims to perfect a structure in which differential movement between the elements composing the structure is eliminated by having the stresses distributed throughout the unit rather than confined to local areas therein, there-

Obviously the invention is not limited to the details of the illustrated structure and method of constructing same, all of which may be variously modified. Moreover, it is not indispensable that all features of the invention be used conjointly as certain of them may be employed to advantage in various different combinations and sub-combinations.

Having described my invention, I claim:

1. A railway crossing construction comprising decking planks laid between and beyond the rails to bridge the ties throughout their entire lengths, surfacing blocks applied directly to the decking planks, filling strips inserted abutting the rails, and a removable unit of the construction adjacent the filling strips.

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2. A railway crossing construction comprising decking planks laid between and beyond the rails to bridge the ties throughout their entire lengths, surfacing composition strips covering the decking planks, filling strips abutting the rails, removable units of the construction adjacent the filling strips, and expansion strips separating the removable units from the adjoining structure.
3. A railway crossing construction comprising decking planks laid over the ties, surfacing strips on and in contact with the decking planks, and a section of this construction in proximity to the rail adapted to be removed as a unit to give access beneath the rail.
4. A railway crossing construction comprising decking planks laid over the ties, surfacing strips on the decking planks, sections of this construction adjacent each rail adapted to be removed as a unit, and an expansion strip interposed between the removable sections.
5. A railway crossing construction comprising decking planks laid over a series of ties, surfacing strips on and in contact with the decking planks, sections of this construction adapted to be removed as a unit, and insulating strips interposed between the rails and the removable units.
6. A railway crossing construction comprising decking planks laid over a series of ties, surfacing on the decking planks, sections of this construction adjacent the rail being adapted to be removed as a unit, and composition strips interposed to separate the removable units from other parts of the structure.
7. A railway crossing construction comprising decking planks laid over a series of ties in abutting relation, composition strips laid crosswise to the decking planks, and insulating strips interposed in the crossing structure on both sides of the rails.
8. A railway crossing structure comprising decking planks laid between and beyond the rails to bridge a series of ties throughout their entire length, composition strips surfacing the decking planks, insulating strips interposed in the structure on both sides of the rails, and expansion strips inserted at intervals to provide removable units in the structure.
9. A crossing structure comprising a substructure, decking planks secured to said substructure, and fibrated bituminous strips surfacing the decking, said decking planks being spaced at intervals with expansion strips.
10. A crossing structure comprising a substructure, decking planks secured to said substructure, and fibrated bituminous strips surfacing the decking planks, some of said surfacing strips being laid transversely to the others.
11. A crossing structure comprising a substructure, substantially rigid decking planks secured to said substructure for underlying the entire area to be surfaced, and fibrated bituminous strips applied directly to the decking planks.
12. A crossing structure comprising a substructure, surfacing strips of fibrated bituminous material, and decking planks more rigid in character than the surfacing strips interposed between said surfacing strips and substructure to support directly the strips at all points for preventing abrupt differential movement in the crossing structure.
13. A crossing structure comprising a substructure and a superstructure, said superstructure being supported on the substructure and embodying in its construction a removable unit having a substantially rigid base faced with a fibrated bituminous surfacing strip.
14. A crossing structure comprising a substructure and a superstructure, said superstructure being supported on the substructure and embodying in its construction a removable unit having a wooden base and a fibrated bituminous surfacing strip.
15. A railway crossing comprising a substructure and a superstructure, said superstructure being supported on the substructure and embodying in its construction a removable unit having a substantially rigid base and a composition plastic surfacing plank directly attached together.
16. A railway crossing comprising a substructure and a superstructure, said superstructure being supported on the substructure and embodying in its construction a removable unit having a substantially rigid base and a bituminous surfacing plank co-extensive throughout in width with said base.
17. A crossing structure comprising a substructure, wooden decking planks secured to said substructure for underlying the entire area to be surfaced, and fibrated bituminous strips applied directly to the decking planks.
18. A crossing structure comprising a substructure, surfacing strips of fibrated bituminous material, and wooden decking planks interposed between the surfacing strips and substructure to support directly the strips at all points for preventing abrupt differential movement in the crossing structure.
19. A pavement unit adapted to be readily inserted in and removed from the pavement, consisting of a plurality of members arranged and fixedly secured parallel to each other, independent traffic surface mounted upon and fixedly secured to said members.
20. A removable pavement unit consisting of a rigid supporting base, a traffic surface fixedly secured thereto containing a fibrous and a bituminous material.
21. A pavement unit consisting of a rigid supporting base, a traffic surface fixedly secured thereto and removable therewith, said

traffic surface containing a homogeneous mixture of bituminous and fibrous materials formed into a relatively rigid yet plastic compact slab.

5 22. A pavement unit consisting of a rigid supporting base, a traffic surface fixedly secured thereto, said traffic surface containing a homogeneous mixture of bituminous and fibrous and granular mineral materials
10 formed into a relatively rigid yet plastic compact slab.

23. A pavement unit consisting of a rigid supporting member, a traffic surface fixedly secured thereto, said traffic surface contain-
15 ing a homogeneous mixture of bituminous and fibrous materials formed into a relatively rigid yet plastic compact slab coextensive in size with the said member.

24. In a pavement, a rail, ties supporting
20 said rail, a rail filler in contact with said rail, a pavement mat adjacent to said rail filler, said paving mat composed of a rigid supporting member adapted to support said mat on a plurality of said ties and a traffic
25 surface attached to said supporting member, said traffic surface containing a bituminous and fibrous material, compacted to form a relatively rigid, yet plastic slab.

Signed at Chicago, Illinois, this 19th day
30 of June, 1928.

THEODORE H. M. CRAMPTON.

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