May 25, 1937. A. E. BROWN 2,081,352

JOINT FOR RAILROAD CROSSINGS

Filed Feb. 19, 1936

Fig. 1.

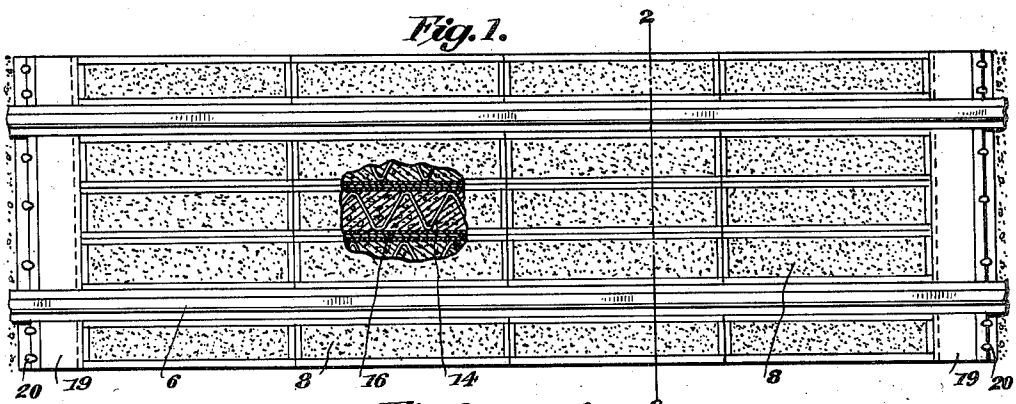


Fig. 2.

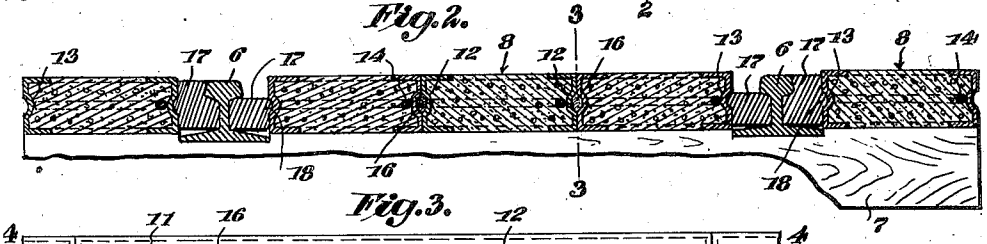


Fig. 3.



Fig. 6.

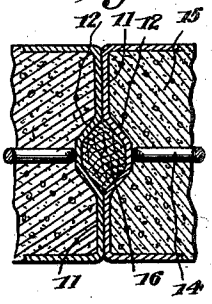


Fig. 4.

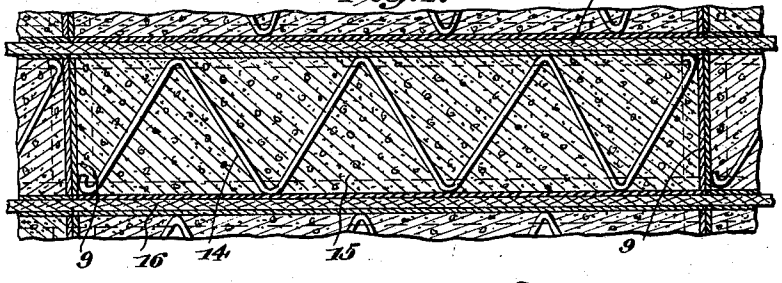
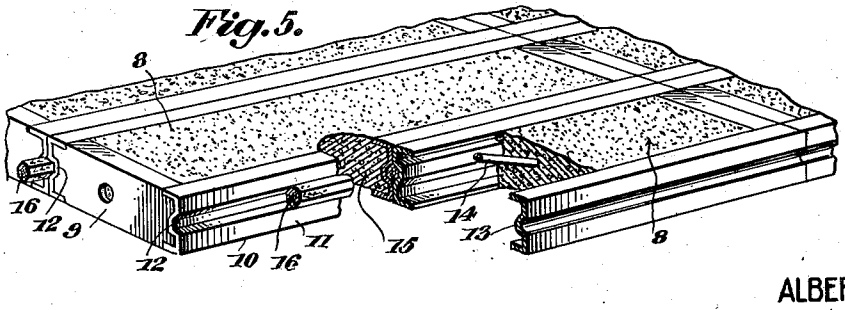


Fig. 5.



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JOINT FOR RAILROAD CROSSINGS

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Application February 19, 1936, Serial No. 64,763

2 Claims. (Cl. 238—8)

The present invention relates to crossings, such as are provided where highways cross railroads, and more particularly relates to such crossings that are composed of a plurality of preformed slabs which may be formed of suitable material, such as reenforced concrete, and which have metal facings around their edges.

One object of the invention is to provide a novel means for securing the slabs in their intended relation, and one which will not add materially to the cost of the completed crossing, and which will not add to the cost of forming the slabs.

Another object is to provide such means which employ wooden members, and in which the wooden members are protected from deterioration by wear or weather.

Still another object is to provide a structure in which the crossing is not attached to the ties, and consequently is not affected should the ties become uneven.

In the accompanying drawing:

Figure 1 is a plan view of a crossing constructed in accordance with this invention.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Figure 3 is a sectional view on the line 3—3 of Figure 2.

Figure 4 is a sectional view on the line 4—4 of Figure 3.

Figure 5 is a broken perspective view of a section of a crossing.

Figure 6 is an enlarged sectional view showing one of the joints between the longitudinal edges of the two slabs.

Describing the drawing more particularly, the railroad rail 6 is secured as usual to ties 7. The crossing is composed of a plurality of pre-formed slabs 8. These slabs 8 have end facings 9 of metal, and their longitudinal edges are provided with special facings 10. The facings 10 are preferably composed of channel material having a web portion 11, which web portion is provided with an inwardly extending channel 12 forming on the inner side of the facing, a rib 13. The slabs are reenforced by serpentine bars 14 extending through them from side to side, and the apices of which are welded to the ribs 13. The slabs are filled with suitable material, for example, cement, designated 15.

These slabs are laid in edge to edge and end to end relation, preferably parallel to the rails, as shown in Figure 1.

In order to secure the slabs in their proper positions and hold them flat upon the tie members 7, on which they rest, wooden strips 16 are inserted into the channels 12 between the longitudinal edges of each adjacent pair of slabs. These strips 16 may extend the length of one or more of the slabs. The strips are of such size and cross sectional shape that they engage the walls of the channels 12 of both of the slabs, between which they are positioned, and therefore act as splines to prevent the upward motion of any of the slabs. They are of such size and cross sectional shape that they are completely enclosed within the channels of the two adjacent slabs.

To form a joint between the rails and the adjacent slabs, wooden filler members 17 having one side shaped to engage the web of the rail and under the head thereof, and the other side having a tongue 18 to engage the channel 12 of the adjacent slab, are positioned between the rail and such slab. In order to fasten the ends of the crossing and to protect the ends of the strips 16 and prevent them from moving longitudinally, end members 19 are provided, which overlie the ends of the slabs and which may be spiked to the ties, as shown at 20.

The structure has many advantages. It adds nothing to the cost of manufacturing the slabs, since it takes advantage of the inset channels which are formed in the longitudinal edges to provide a rib 13 for welding to the bar 14. The cost of the wooden strips which are inserted between the slabs is negligible, and inasmuch as they are completely enclosed by the material of the facings 10, they are protected against damage or deterioration by weather, and being engaged along the entire length of the slabs, they form a strong joint which prevents the slabs from lifting or heaving.

The filler blocks being especially designed to fit the rails on one side under the rail head and on the other side with a rib that engages the channel of the adjacent block, the crossing after the splines have been driven between the sections is rigidly locked between the rails. The splines steady the sections and carry the traffic loads from slab to slab. It will be seen that inasmuch as the crossing is not supported on the ties, that unevenness of the ties will not affect the surface of the crossing as is the case in crossings where members are supported and secured to the ties themselves.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various

changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is:

1. A slab for highway crossing comprising a concrete slab having a serpentine reinforcing bar extending along one dimension thereof and having apices at the sides of the slab, metal facings on the edges of the slab, the facings parallel to the dimension along which the serpentine bar extends, each having a longitudinal inset portion forming on the inner surface an inwardly extending rib, and a longitudinal channel in its outer surface, the walls of the channels forming bearing surfaces for engaging adjacent members of the crossing, and the inner surfaces of the ribs being welded respectively to the opposite apices of the serpentine bar.

2. A highway crossing for railroads comprising a plurality of slabs in edge-to-edge relation, each slab comprising a concrete body, metal facings on the edges of the body, opposite facings having longitudinal channels in their outer faces, longitudinal inwardly extending ribs corresponding to the channels on the inner sides of the facings, and a serpentine reinforcing bar having its opposite apices welded to the ribs of the respective opposite facings, and strips inserted into the passages between the channels of adjacent slabs, the said strips engaging the surfaces of the walls of the channels and acting as splines.

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