July 16, 1929. H. A. MYERS 1,721,464

PAVEMENT CONSTRUCTION

Filed May 24, 1928

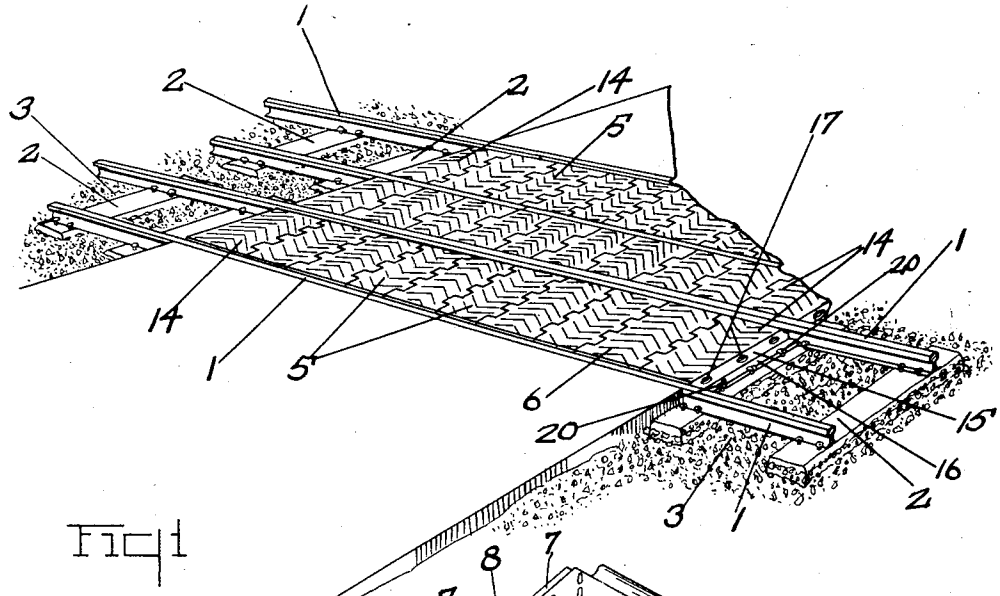


Fig 1

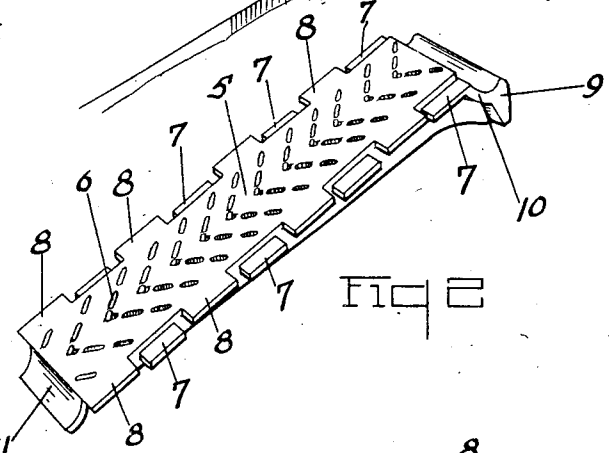


Fig 2

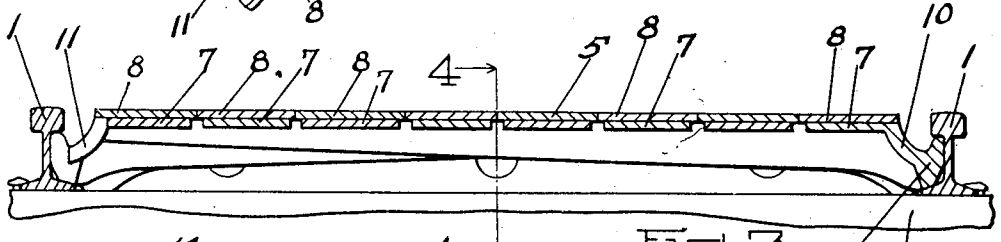


Fig 3

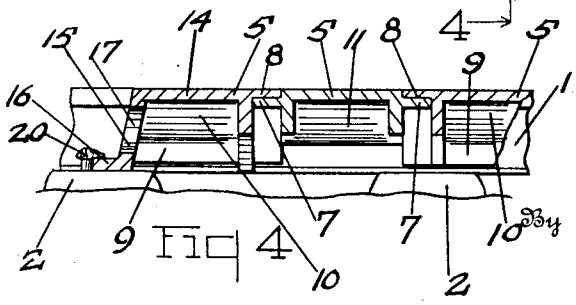


Fig 4

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# UNITED STATES PATENT OFFICE.

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## PAVEMENT CONSTRUCTION.

Application filed May 24, 1928. Serial No. 280,168.

My invention has for its object to provide an exceedingly efficient, durable, and readily replaceable pavement, sidewalk, or floor construction, whereby supporting surfaces may be made to withstand the continuous wear and tear of heavy traffic to which they may be subjected. The invention particularly has for its object to provide a roadway construction for railroad crossings that will readily permit the repair of the tracks or the track bed beneath the crossing. Also, the invention permits the formation of the roadway structure between the rails, that form the tracks, so that, where it is desirable, the surface of the roadway between the rails will be located substantially at a level slightly below the level of the tops of the rails, except for the necessary spaces on the insides of the rails for the flanges of the wheels of the trains. The invention thus provides a road cross track construction which is so formed that it may be easily removed or parts thereof displaced for replacement of ties, spiking of the rails, adjustments of the rails or alteration of the track bed.

The invention also provides a road cross track construction having means for providing for ventilation of the ties to prevent dry rot and deterioration of the track construction.

The invention particularly provides a plurality of metal slabs having interlocking parts so arranged that displacement of the end slabs will permit loosening of the entire road cross track construction and enable the shifting of one or more of the slabs which permits operations on the tracks as may be desired for purposes of repair or adjustment of the track or track bed. Preferably, the slabs are formed of cast iron, such as cast wrought iron, each slab being suitably reinforced and provided with interengaging parts for interengaging the rails and interlocking the edges of adjoining slabs or castings.

The invention may be contained in floor or roadway constructions having slabs or elements that differ in shape and in their interrelated parts and, to illustrate a practical application of the invention, I have selected a cross track roadway construction having elements formed of cast wrought iron, and interengaging parts so formed that the roadway may be readily formed and the elements may be readily displaced or replaced for any desired purpose. The particular construction referred to is shown in the accompanying drawings.

Fig. 1 illustrates a perspective view of a roadway construction in connection with which slabs, embodying my invention, are assembled and interconnected. Fig. 2 is a perspective view of the cast iron slab that forms an element of the roadway construction. Fig. 3 is a view of a transverse section taken across the rails of the track. Fig. 4 is a view of a section taken on the plane of the line 4—4 indicated in Fig. 3.

In the particular form of roadway or interrail structure shown in the drawings, the slabs embodying my invention are located between the rails of the tracks, it being understood, however, that the roadway construction formed of the elements embodying my invention may be extended indefinitely and cover any desired area on opposite sides of the tracks. As is well known in the art, the rails 1 of the tracks are secured to suitable ties 2 which are embedded in a track bed 3. The rails 1 are spiked to the ties 2 and when it is particularly desirable to replace the ties 2 and elevate or adjust the track bed 3, which occurs when there is a considerable settling of the bed 3, by my invention I have provided a roadway construction having an upper surface located at substantially the same height as the tops of the rails and which may be readily removed or shifted in its entirety or any parts thereof to enable ready repair of the track construction. The invention provides a plurality of cast iron slabs 5 that may be provided with openings 6 whereby the ties 2 will be ventilated and, consequently, dry rotting will be prevented. The cast iron slabs 5 are provided with a plurality of lugs or short flange portions 7 and 8 that extend from their side edges. The lugs or flange portions 8 are located above the planes of the lugs or flange portions 7, and preferably so that the top surfaces of the flange portions 7 and the under surfaces of the flange portion 8 will lie in substantially the same plane. One end of each slab 5 has a pair of flange portions 7 on opposite side edges and the other end of the slab 5 has a pair of flange portions 8 on opposite sides of the slab 5. The end flange portions 7 terminate in a downwardly extending flange part or boss 9 and a curved portion 10 interconnects the boss 9 with the body portion of the casting or slab

5. The opposite end of the slab 5 is provided with a curved flange 11 that conforms to the curved portion 10 of the slab 5. Where the slabs 5 form the side edges of the roadway construction, the short flange portions 7 and 8 are located on but one side of the slab 5 and the other side edge is provided with a downwardly extending flange portion 15 having the openings 17 formed therein for purposes of ventilation, and a laterally extending flange portion 16. Thus, when the laterally extending flange portion 16 is located on one of the ties 2, the top of the slab 5 will be located at substantially the same height as the tops of the rails 1. The boss or enlarged portion 9 and the curved connecting portion 10 also locate the top of the end of the slab 5, to which the boss 9 is integrally connected, at a height the same as that of the tops of the rails 1 when the laterally extending flange portion 16 rests on one of the ties 2. The curved portions 10 and 11 are such as to form channels on the inner sides of the rails 1 to allow space for the movement of the flanges of the wheels of the trains that pass over the tracks. Preferably, the boss 9 is placed on the base of the rail 1 and interlocks with the top of the rail, the flanges 7 and 8 operating to hold the slab in this interlocking position. The slabs are located so that the bosses 9 of alternate slabs interlock with one rail and the bosses 9 of the intermediate slabs interlock with the other rail. Since the slabs are interlocked by the flanges 7 and 8, a unitary-cross roadway construction is formed.

The lengths of the slabs 5 are such that they will fit between the webs of the rails 1 of the tracks, there being, however, a slight clearance between the end edge of the curved portions 11 and the web of the rails 1 located in proximity thereto to permit placement of the slabs 5 in position between the rails when the boss 9 of each slab is against the web of one of the rails. When each slab 5 is placed in position, it may be moved along the rails 1 until the short flanges 7 and 8 located along the side edges of the slabs 5 interlock with the short flanges 7 and 8 of an adjacent slab 5, thus preventing the removal of the slab 5 without first separating the slabs 5 by moving them along the rails 1.

When the slabs 5 are placed in position, the short flange portions 8 of one slab overlap the short flange portions 7 of the adjoining slab. Since each slab has along each side edge, a flange portion 8 located above each flange portion 7 of the adjoining slab 5 and a flange portion 7 located below each flange portion 8 of the adjoining slab 5, the slabs 5 cannot be separately raised without first sliding the slabs 5 along the rails 1 to separate them. When the slabs 5 have been placed in position so that their side edges are interlocked, they are secured in this position from movement along the rails. In the form of construction shown, the end slabs 14 have the flange portions 7 and 8 along one side edge only, which are adapted to engage the flange portions 7 and 8 of the adjoining slab 5 while the other side edge of each end casting 14 is secured by means of spikes 20 that are driven through the ties 2 located at the sides of the cross road track construction.

When, therefore, it is desired to repair the track or elevate the bed, the spikes 20 at one or both sides of the cross road track construction may be removed and the slabs 5 may be moved along the rails, and, if desired, may be removed and when the repair is completed, they may be readily replaced and resecured by means of the spikes 20.

Where the slabs 5 are used for forming a flooring or pavement, cross strips may be used in place of the rails 1, the cross strips and the ends of the slabs 5 having interlocking or interengaging parts for securing the slabs 5 at their ends, the slabs 5 being interlocked along the side edges by the flange portions 7 and 8. Thus, by my invention, I have provided a pavement or flooring that is exceedingly durable and may be readily placed in position and has parts that may be easily removed and, if desired, replaced.

In the claims, I use the term "pavement", by which term I mean to broadly include and cover flooring, road pavement, sidewalks, and similar structures, where it is desired to produce a durable surface for the sustainment of trucks and heavy traffic and one that will withstand the wear and tear of heavy usage by movement of bodies thereover.

I claim:

1. In a cross railroad pavement construction, a plurality of slabs extending between the webs of the rails, one end of each slab fitting the space beneath the top of the rail and above the base of the rail, the opposite end of the slab having a flange inclined downwardly towards the web of the rail to a point where it will clear the top of the rail when the said end is raised and while the opposite end is located intermediate the top of the rail and the base, and means for locking the slabs in position between the rails.

2. In a cross railroad pavement construction, a plurality of slabs extending between the webs of the rails, each slab having a plurality of flanges protruding from the side edges of the slab, the said protruding flanges along each edge divided into two sets, the protruding flanges of one set located so that their under surfaces will be in the plane of the top surfaces of the other set, the protruding flanges of the sets arranged alternately along the edges of the slab, the protruding flanges of the upper sets of adjoining slabs interfitting to close the spaces between the adjoining slabs.

3. In a cross railroad pavement construction, a plurality of slabs extending between

the webs of the rails, each slab having a plurality of flanges protruding from the side edges of the slab, the said protruding flanges along each edge divided into two sets, the protruding flanges of one set located so that their under surfaces will be in the plane of the top surfaces of the other set, the protruding flanges of the sets arranged alternately along the edges of the slab, a pair of one set of protruding flanges located at one end of the slab and a pair of the other set of flanges located at the opposite end of the slab, the protruding flanges of the upper sets of adjoining slabs interfitting to close the space between the adjoining slabs and for preventing longitudinal movement of one slab relative to the other.

4. In a cross railroad pavement construction, a plurality of slabs extending between the webs of the rails, one end of each slab fitting the space beneath the top of the rail and above the base of the rail, the opposite end of the slab having a flange inclined downwardly towards the web of the rail to a point where it will clear the top of the rail when the said end is raised and while the opposite end is located intermediate the top of the rail and the base, each slab having a plurality of flanges protruding from the side edges of the slab, the said protruding flanges along each edge divided into two sets, the protruding flanges of one set located so that their under-surfaces will be in the plane of the top of the surfaces of the other set, the protruding flanges of the sets arranged alternately along the edges of the slab, a pair of the upper flanges located at one end of the slab and on opposite edges thereof and a pair of the lower flanges located at the opposite end of the slab and in opposite edges thereof, and at the end having the part interfitting the top of the rail and the base of the rail.

5. In a cross railroad pavement construction, a plurality of slabs extending between the webs of the rails, one end of each slab fitting the space beneath the top of the rail and above the base of the rail, the opposite end of the slab having a flange inclined downwardly towards the web of the rail to a point where it will clear the top of the rail when the said end is raised and while the opposite end of the slab is located intermediate the top of the rail and the base of the rail, each slab having a plurality of flanges protruding from the side edges of the slab, the said protruding flanges along each edge divided into two sets, the protruding flanges of one set located so that their under-surfaces will be in the plane of the top surfaces of the other set, the protruding flanges of the sets arranged alternatively along the edges of the slab, a pair of protruding flanges of the upper set located at one end of the slab and on opposite edges thereof, and a pair of the lower flanges located at the opposite end of the slab and at opposite edges thereof and at the end having the part interfitting between the top of the rail and the base of the rail for interlocking the flanges, the protruding flanges of the upper sets of adjoining slabs interfitting to close the spaces between the adjoining slabs.

In witness whereof I have hereunto signed my name to this specification.

HUBERT A. MYERS.