Feb. 24, 1931. J. A. DAILEY ET AL 1,793,779

RAILWAY CROSSING

Filed April 14, 1930

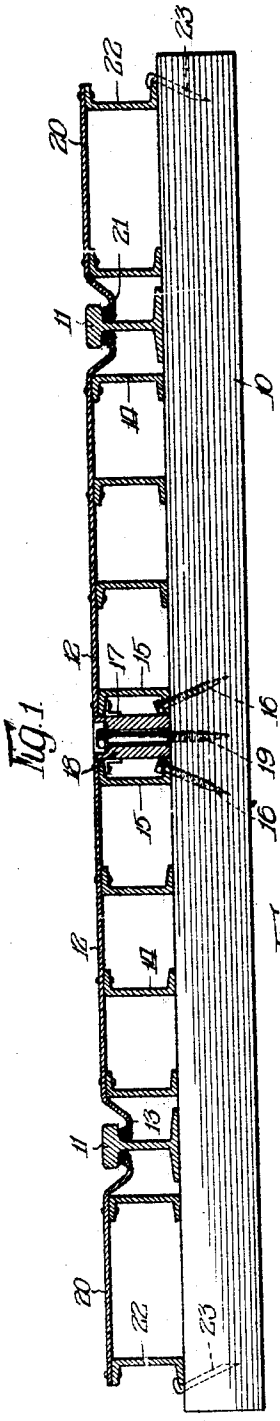


Fig. 1

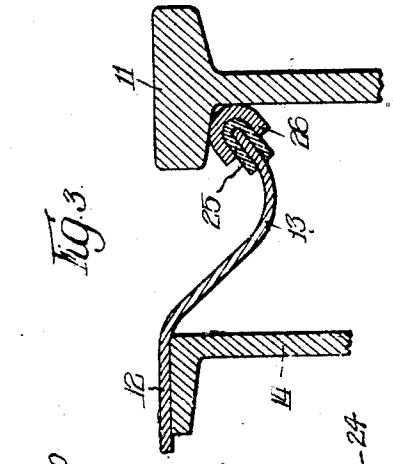


Fig. 3

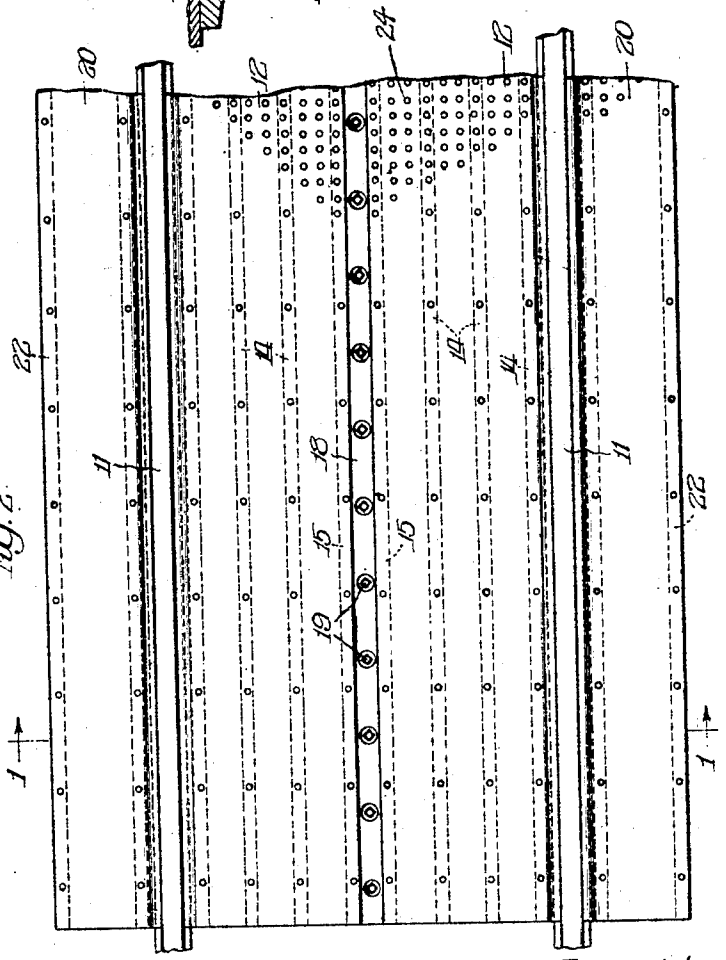


Fig. 2

Inventors:
John A. Dailey,
Lewis W. Gerth,
By Wilkinson, Huxley, Byron & Knight
Attys.

Patented Feb. 24, 1931

1,793,779

UNITED STATES PATENT OFFICE

JOHN A. DAILEY, OF BURLINGTON, AND LEWIS W. GERTH, OF WAPELLO, IOWA

RAILWAY CROSSING

Application filed April 14, 1930. Serial No. 444,181.

The invention relates to improvements in railway crossings and has reference in particular to a metallic crossing of the portable type.

An object of the present invention is to provide an improved railway crossing comprising a plurality of metallic sections, supported on ties at a suitable height to form a surface in the same plane with the tread of the rails, the sections being adapted to be readily placed in position or removed without interfering with the rails.

Another object of the present invention is to provide an improved railway crossing of the above type which may be built at the factory, easily shipped to its destination and conveniently assembled on the job.

A further object is to provide a railway crossing of the above type having means for insulating the sections from the rails so that it will be impossible for electrical currents to pass from one rail to the other.

A yet further object is to provide a railway crossing which will be efficient in use and adapted for all kinds of traffic, simplified in construction and durable in wear.

With these and various other objects in view, the invention may consist of certain novel features of construction and operation, as will be more fully described and particularly pointed out in the specification, drawings and claims appended hereto.

In the drawings, which illustrate an embodiment of the device and wherein like reference characters are used to designate like parts—

Figure 1 is a cross sectional view taken transversely of the railroad track and showing the construction of the present invention.

Figure 2 is a top plan view of the structure shown in Figure 1.

Figure 3 is a detail sectional view showing the construction for insulating the sections from the rails.

Referring to the drawings, it will be noted that the present invention is adapted to be associated with a railroad track of the conventional type, employing a series of transverse ties 10, upon which are supported in correct spaced relation the rails 11. Any preferred means such as spikes may be employed for securing the rails 11 in place upon the ties.

The crossing comprises a plurality of metallic plate sections of which plates 12 are adapted to be located centrally of the crossing between the rails 11. The plates 12 are counterparts of each other, each being provided with a grooved edge portion 13 on one side, which portion is adapted to underlie the head of the rails 11. For supporting the plates 12 a plurality of supporting members 14 are provided, which members are of channeled formation. These members rest upon the top of the ties and have secured to them by riveting or other means, the plates 12. Each plate preferably employs four of the channeled members for supporting it upon the ties. The central supporting member 15 of each plate has its channeled portion in facing relation with the channeled portion of the oppositely disposed member 15, each member being firmly secured to the ties 10 by suitable spikes 16 and in turn having riveted to them the plates 12 as described. In addition the channeled members 15 have riveted to their upper flanges a plurality of brackets 17 for purposes to be described. The riveting for securing the channeled members to their respective plates 12 is located at intervals as shown in Figure 2 by the rivet heads and at these intervals the centrally disposed channeled members 15 have secured to them the brackets 17.

Extending longitudinally of the crossing and parallel with the rails there is provided a central beam 18 preferably for the purposes of the present invention, comprising a wooden beam and being secured to the cross ties 10 by centrally disposed spikes 19. With the channel members 15 secured in place and the brackets 17 located at their proper intervals, the wooden beam 18 is then adapted to be located in position between the members 15 and is of a size to exactly fit within the space defined by the members and so thus has bearing engagement against the brackets 17. With the wooden beam firmly secured in place by the spikes 19 and the channel members 15 by their spikes 16, the brackets 17 will serve to

provide a rigid support for the upper portion of the channeled members. Any thrust which may be imparted to the plates 12 will be thus transmitted to the channeled members 15 and to the brackets 17, which in turn will transmit the same to the central beam. With the beam thus firmly secured to the ties it is seen that the plates 12 and their supporting members form an extremely rigid construction.

Disposed outwardly of the rails are approach plates 20, which plates are counterparts of each other being provided with one straight edge and a grooved edge 21 which has underlying relation with the heads of the rails 11. These approach plates are adapted to be supported on the ties at substantially the same height as the plates 12 by supporting members 22, also of channeled form. The members 22 rest upon the ties 10 and have the approach plates 20 secured thereto by riveting or other means. The outside supporting member is adapted to be secured to the tie by a headed spike 23 as shown in Figure 1. These spikes are located in the ties 10 in a direction to not only firmly secure the members 22 thereto but also to force the approach plates 20 in a direction towards the rails 11 so that their grooved edge 21 will underlie the heads of the rails.

In assembling the construction at that particular location on the tracks adapted to form a crossing for vehicular traffic, it is only necessary to locate the plates 12 centrally of the roadbed so that their grooved edge 13 will underlie the heads of the rails 11. The plates 12 are of a width when properly located to allow insertion of the centrically disposed wooden beam 18. It is of course understood that previous to securing the beam 18 in place it is necessary to firmly secure the supporting members 15 to the ties and to also locate in their proper position the brackets 17. With the central part of the crossing in assembled position the approach plates 20 can then be located on the outer side of the rails and secured in place by means of the spike members 23.

For forming a non-skidding surface for the crossing, the plates 12 and approach plates 20 are provided with a plurality of stuckup knobs 24 located in spaced positions on their upper surface. These knobs constitute a cheap and effective means for preventing skidding of the rubber tires of automobiles and furthermore has the advantage in that they do not injure the tires.

For the purpose of allowing automatic operation of danger signals which is accomplished by causing a current to flow from one rail to the other, it is necessary to insulate the rails from each other, otherwise signaling by this means would be impossible. To this end the grooved edges 13 and 21 of the plates 12 and the approach plates 20 respectively are tipped with a strip of insulating material 25 as shown in Figure 3. This insulating strip is adapted to extend the full width of the crossing, that is, from one end of the plates to the extreme other end. By the construction of the present invention the grooved edges of the plates terminate a short distance from the rails 11 and therefore the plates 12 and 20 do not have contacting engagement with the rails at all. For securing the strip of insulating material 25 to the edges of the plates a clip of steel 26 is provided of U-shaped form adapted to be fitted upon the insulating strip and to have bearing engagement against the rails. The steel clips 26 are provided at intervals throughout the length of the crossing preferably every two feet. It is thus seen that by means of the above construction the electric currents traveling in each rail 11 will be prevented from passing from rail to rail by reason of the insulating strip 25, and also that the steel clip serves to firmly hold the insulation in place as well as forming a backing means for engaging the rails.

It is to be understood that we do not wish to be limited by the exact embodiment of the device shown, which is merely by way of illustration and not limitation, as various and other forms of the device will of course be apparent to those skilled in the art without departing from the spirit of the invention or the scope of the claims.

We claim:

1. In combination with the rails and ties of a railroad track, a pair of plates having grooved side edges adapted to underlie the heads of said rails, supporting members secured to said plates, certain of said members being disposed facing each other, a beam located between the members, and means securing said members and beam to the ties.

2. In combination with the rails and ties of a railroad track, a pair of plates having grooved side edges adapted to underlie the heads of said rails, channeled members resting on the ties and supporting said plates, certain of said members disposed with their channels facing each other, a longitudinally extending beam located between the channeled members, and means securing said members and beam to the ties.

3. In combination with the rails and ties of a railroad track, a pair of plates having grooved side edges adapted to underlie the heads of said rail, supporting members in channel form resting on said ties and secured to said plates, certain of the channel members having their channel portions facing but spaced from each other, a rectangular beam located between the spaced members, brackets on the spaced members for holding the beam in place, and means securing the spaced members to the ties.

4. In a railway crossing in combination, a pair of rails, crossing plates between said

rails and adjacent thereto, supports for said crossing plates, edge portions of said crossing plates underlying the heads of said rails, a strip of insulation beaded over the edge of said portions, and means for maintaining the insulation in place.

5. In a railway crossing in combination, a pair of rails, crossing plates between said rails and adjacent thereto, supports for said crossing plates, edge portions of said crossing plates underlying the heads of said rails, a strip of insulation beaded over the edge of said portion, and metallic clips at spaced intervals for maintaining the insulation in place.

6. In a railway crossing in combination, a pair of rails, crossing plates located between the rails and adjacent thereto, supports for said crossing plates, the edge portions of said crossing plates underlying the rails but spaced therefrom, a strip of insulation beaded over the edge of said portions, and clips for securing the insulation in place and having bearing against the rails.

7. In a railway crossing, in combination, a pair of rails, crossing plates between said rails and adjacent thereto, supports for said crossing plates, edge portions of said crossing plates underlying the heads of said rails, insulating material bounding the inner edges of said crossing plates, and a longitudinally extending beam located intermediate said first mentioned crossing plates for reinforcing the structure.

Signed at Burlington, Iowa, this 21st day of March, 1930.

LEWIS W. GERTH.
JOHN A. DAILEY.