W. A. CROFFORD.

METAL ROADWAY.

APPLICATION FILED APR. 9, 1917.

1,234,138. Patented July 24, 1917.

Fig. 1.

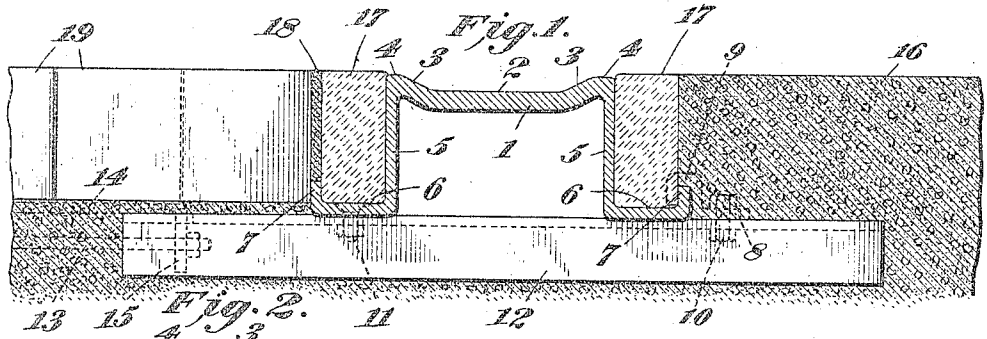


Fig. 2.

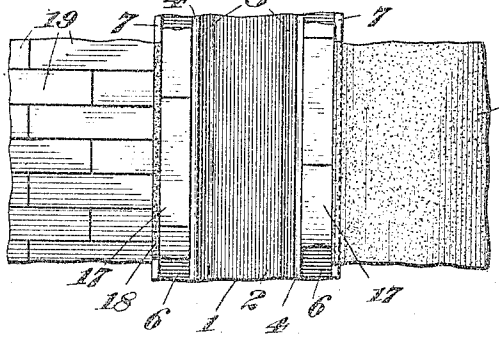


Fig. 3.

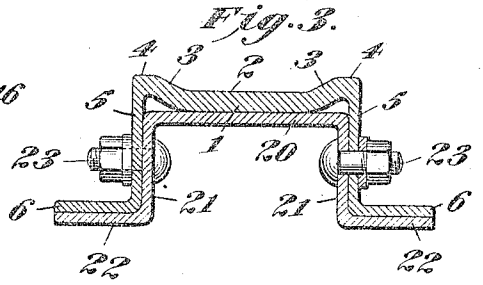


Fig. 4.

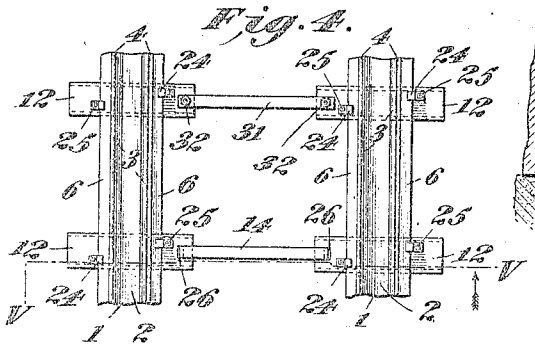


Fig. 6.

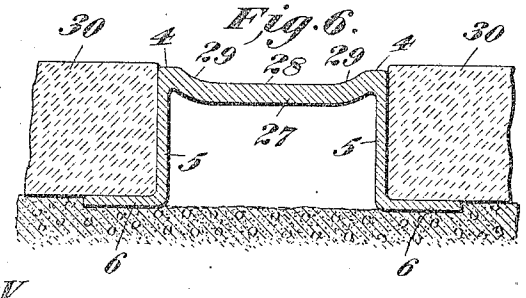


Fig. 7.

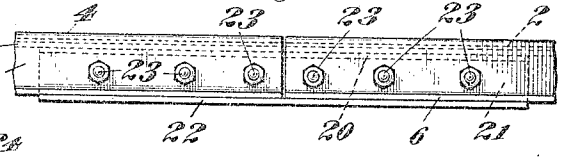
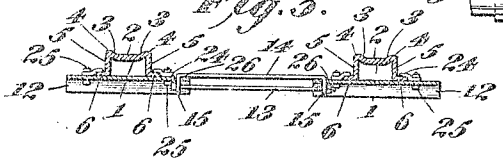


Fig. 5.



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METAL ROADWAY.

1,234,138. Specification of Letters Patent. Patented July 24, 1917.

Application filed April 9, 1917. Serial No. 160,618.

To all whom it may concern:

Be it known that I, WILLIAM A. CROFFORD, a citizen of the United States, residing in the city of Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Metal Roadways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improved roadways and the object is to provide a better roadway for automobiles, wagons and other vehicles drawn by horses or propelled by other power.

In the illustrations and description herewith, I have shown a metal roadway or track comprising my improved form of channel rail, having a flat tread of sufficient width to accommodate the various widths of tires and wheel treads used on ordinary vehicles, with upwardly inclined, straight or curved projections at the sides of the tread, side webs and base flanges adapted to be laid with brick, concrete or other material, so as to avoid a rut being formed by vehicles turning off or on the track. I have also shown a method of connecting the channel rails to the cross-ties and embedding the same in the roadway.

Having thus given a general description of my invention, I will now, in order to make the matter more clear, refer to the annexed sheet of drawings, which forms part of this specification and in which like characters denote like parts:—

Figure 1 is a vertical transverse sectional elevation of a part of the roadbed showing my track rail embedded therein and resting on the channel portion of the cross-tie; Fig. 2 is a top plan view of a portion of one of the rails and the adjoining road bed drawn to a reduced scale; Fig. 3 is a vertical transverse section through a slightly modified form of rail with a splice bar also in section for connecting the ends of the rails together; Fig. 4 is a top plan view on a reduced scale of a portion of the track structure having the rail section shown in Fig. 3 and showing the rail ties attached thereto; Fig. 5 is a vertical transverse sectional elevation of the track structure taken on the line V—V of Fig. 4; Fig. 6 illustrates another slightly different form of rail and the manner of laying the bricks at the sides thereof; and Fig. 7 is a side elevation of the meeting ends of two rails showing the manner of splicing the rails together.

Referring now to the various characters of reference on the drawings:—1 indicates the top portion of the rail, 2 the rail tread, which is made sufficiently wide to receive wheels of various widths and treads commonly used on public highways, 3, upwardly inclined surfaces at the sides of the tread, which tend to keep the wheel on the rail while permitting it to turn off when desired, and 4 the top edges of the rail. The side webs of the rail are shown at 5 and the base flanges at 6, those illustrated in Fig. 1 having vertical flange extensions formed integral therewith for the purpose of retaining bricks or concrete close to the rail to prevent formation of ruts at the sides of the rails. 8 indicates a clip having a hook portion 9 whereby the base flanges 6, having vertical extending flanges 7, are adapted to be secured to the channel portion of the cross-tie 12 by means of bolts 10. 11 indicates a countersunk bolt, whereby the base flanges 6 may be directly attached to the channel portion 12 of the cross-tie. The two channel portions 12 of the cross-tie are connected by a bar 14 with bent ends 15, which are secured by a bolt 13, forming the center of the cross-tie. 16 is the side road bed which may be of dirt, concrete, brick, macadam, or other suitable material. 17 are bricks laid at the side of the rail in order to avoid a rut being formed by vehicles turning off or on the track, these being retained as shown by the flanges 7. 18 is an opening between the bricks 17 and 19 which may be filled with dirt, concrete, asphaltum or other suitable material.

Referring now to Figs. 3 and 7:—20 indicates a splice bar with webs 21 and flanges 22 adapted to connect the ends of the rails together by means of the bolts 23.

Referring now more particularly to Figs. 4 and 5:—the rail is secured to the channel portions 12 of the cross-ties by means of the clips 24 and clip bolts 25. 26 are slots in the channel portions 12 of the cross-ties for receiving the bent ends 15 of the connecting bar 14. I may, however, use a straight connecting bar 31 which is adapted to be secured to the channel portion of the cross-tie by means of bolts 32.

Referring now to Fig. 6:—27 indicates a slightly modified form of my channel rail in which 28 is the top portion or rail tread, 29 curved surfaces at the sides of the tread and 30 bricks laid at the side thereof.

Although I have described and illustrated my invention in considerable detail, I do not wish to be limited to the exact and specific details thereof as shown and described, but may use such modifications in, substitutions for, or equivalents thereof, as are embraced within the scope of my invention, or as pointed out in the claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. A metal trackway comprising a rail provided with a flat tread portion, upwardly projecting edge portions joined to the tread portion by inclined surfaces, and a pair of downwardly extending web portions integral therewith.

2. A metal trackway comprising a flat tread portion, upwardly projecting edge portions, curved surfaces joining said tread portion and projecting portions, and downwardly extending web portions adapted to be embedded and supported in the roadway.

3. In a metal trackway, an inverted trough section comprising a flat tread portion, upwardly projecting edge portions joined thereto by sloping portions, a pair of downwardly extending web portions, flanges projecting outwardly from the lower margins of said web portions, adapted to receive and support the contiguous parts of the side road.

4. A metal trackway comprising a pair of channel section rails, each having a flat tread portion, upwardly projecting portions on each side thereof connected thereto by sloping portions, a pair of vertical web portions, flange portions extending outwardly from the lower margins of said web portions, a plurality of cross-ties secured below said rails and adapted to support and hold them to gage.

5. A metal trackway comprising a pair of inverted channels, each composed of a flat tread portion, and upwardly projecting portions at the edges thereof united to said flange portion by sloping portions, a pair of integral webs substantially parallel and projecting downwardly from said upwardly projecting portions, each web being provided with a flange extending outwardly from the lower margin thereof, a plurality of cross-ties secured below said rails and adapted to support and hold them to gage.

6. In a metal roadway, a track rail comprising a flat tread portion, upwardly extending edge portions connecting thereto by sloping surfaces, a pair of downwardly projecting webs, each being provided with a flange extending outwardly from the lower margin thereof, each of said flanges having an upwardly projecting portion on its margin adapted to retain brick or other material in close contact with the web of said rail.

7. A metal trackway comprising a pair of inverted trough sections, each having a flat tread portion, upwardly extending edge portions connected to the tread portion by sloping surfaces, a pair of webs projecting downwardly from the margins of said tread portion, each web being provided with a flange extending outwardly from its lower margin, a plurality of cross-ties secured below said rails and adapted to support and hold them to gage.

In testimony whereof I hereunto affix my signature.

WILLIAM A. CROFFORD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."