No. 729,091. PATENTED MAY 26, 1903.

G. H. PARMELEE.

RAILWAY TRACK STRUCTURE.

APPLICATION FILED NOV. 13, 1902.

NO MODEL.

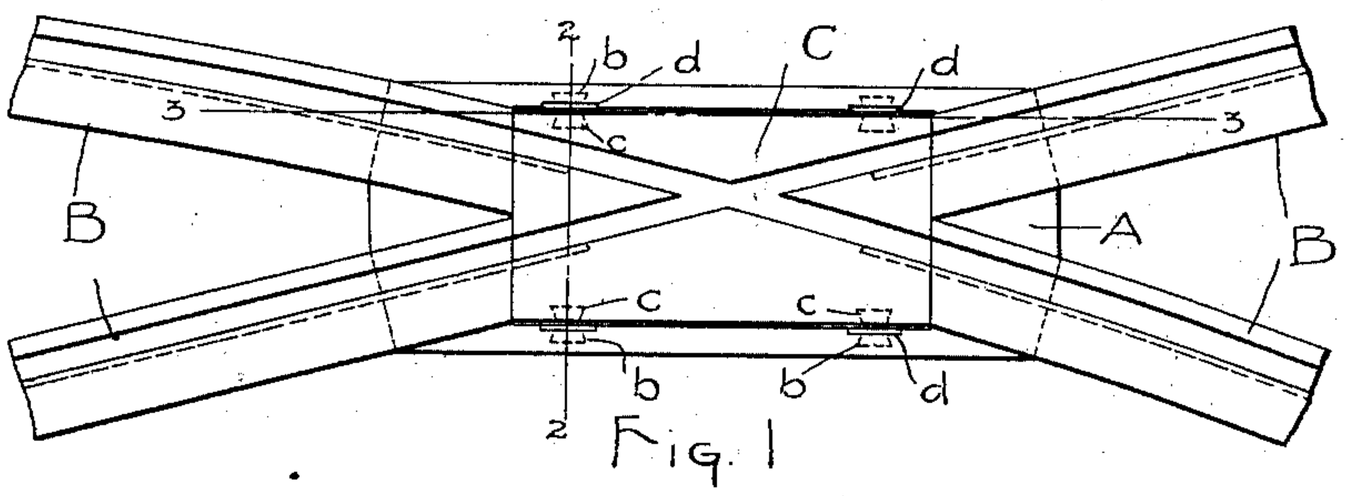

Fig. 1

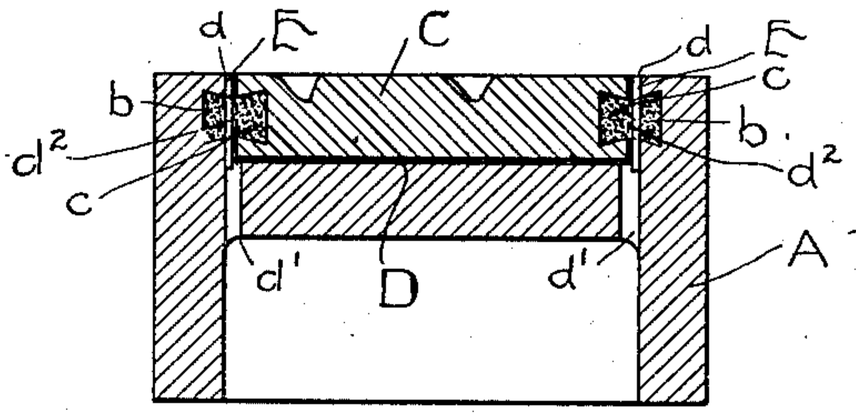

Fig. 2

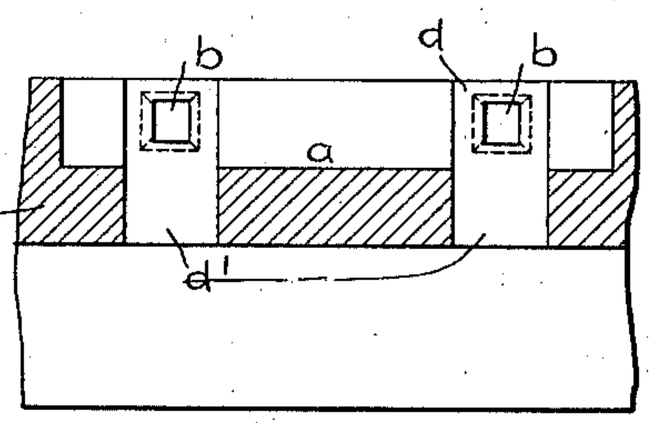

Fig. 3

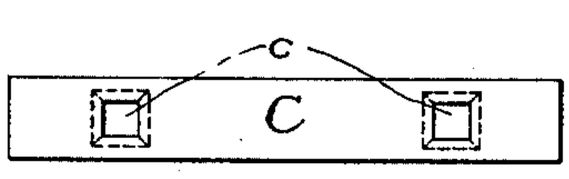

Fig. 4

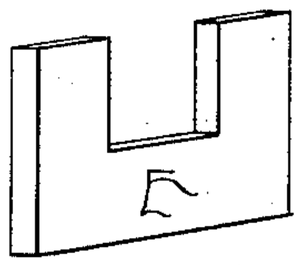

Fig. 5

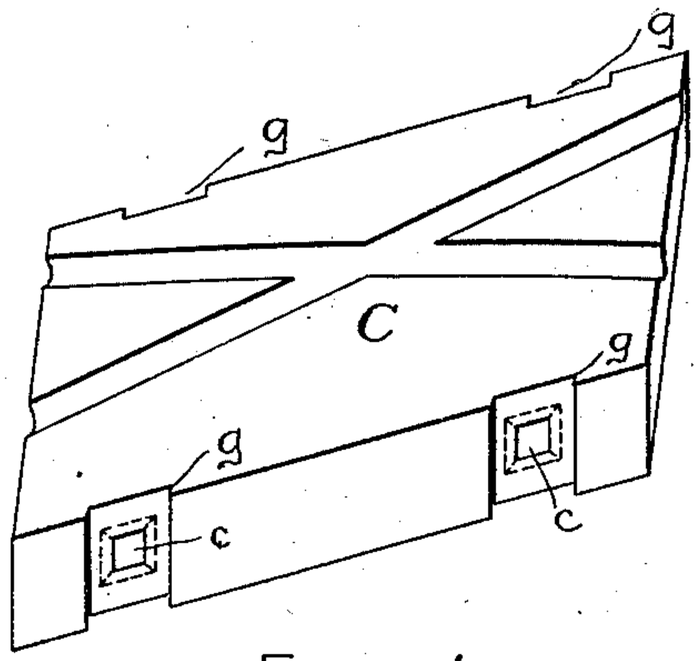

Fig. 6

WITNESSES:
A. V. A. B. McGinley.
Loretta O'Donnell

INVENTOR
Geo. H. Parmelee

No. 729,091. Patented May 26, 1903.

UNITED STATES PATENT OFFICE.

GEORGE H. PARMELEE, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE LORAIN STEEL COMPANY, A CORPORATION OF PENNSYLVANIA.

RAILWAY-TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 729,091, dated May 26, 1903.

Application filed November 13, 1902. Serial No. 131,084. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PARMELEE, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Railway-Track Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to means of novel character for securing in place and removing the renewable portions or plates of railway-track structures, such as frogs, curve-crosses, girder-crosses, slot structures, switches, switch-mates, &c. In these structures those portions thereof which are subject to the greatest wear in service are now largely (especially in street-railway work) made in the form of a plate or block of wear-resisting material. These plates or blocks must necessarily be held in place very securely to prevent them from becoming loose under the severe usage which they receive in the street, both from car traffic and miscellaneous street traffic. It is also desirable to secure them removably, so that they can be replaced should they become worn or defective from any cause, and this without taking up the entire structure and without disturbing the adjacent pavement. This last-named requirement makes the problem of providing a suitable fastening a somewhat difficult one, since it excludes the use of any fastening means which must be applied or removed from the side or bottom of the structure.

In an application of even date herewith, Serial No. 131,082, I have described and claimed, broadly, a fastening for plates of the above-described character, consisting of a body of some retaining material seated in oppositely-located pockets or cavities of the plate and the body portion of the structure and having integral connecting portions lying between said pockets or cavities and accessible from the surface of the structure to permit them to be sheared, cut, or fractured to thereby release the plate, and in another application, Serial No. 131,083, also of even date, I have described and claimed means for facilitating fracturing or shearing such connecting portions.

My present invention has relation to a similar fastening; and its object is to provide means whereby a fastening of that character can be readily and quickly released by cutting the connecting portions with a saw.

With this object in view my invention consists in providing in the structure at the time it is assembled and adjacent to the said connecting portions a filling of some material, such as wood, which when it is desired to remove the plate can be readily split or dug out, leaving said connecting portions accessible to a saw applied from the surface of the structure.

My invention also consists in the novel construction, arrangement, and combination of parts, all substantially as hereinafter shown and described, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a frog or curve-cross embodying my invention; Fig. 2, a section on the line 2 2 of Fig. 1; Fig. 3, a section on the line 3 3 of Fig. 1 with the plate removed; Fig. 4, a side view of the plate; Fig. 5, a detail view showing one form of filling, and Fig. 6 a perspective view of a modified form of plate.

In the figures the letter A designates the body portion of the structure, having therein the plate-seating pocket *a*.

B designates the diverging rail members.

C is the renewable track-surfaced portion or plate. Formed in the walls of the pocket *a* are cavities *b*, and in the sides of the portion or plate are similar and oppositely-located cavities *c*. These cavities are preferably of dovetailed form—that is to say, largest at their inner end—for the purpose of taking up any shrinkage which may occur in the retaining material, as fully described and claimed in my application Serial No. 131,083, above referred to. They may, however, be of any suitable shape.

Surrounding each of the pockets *b* the body portion A is cored back slightly, as shown at *d*, and this core is preferably extended down through said body portion to form a slot or opening *d'*.

D indicates the retaining material which beds the plate and also fills the pockets *b* and *c* to thereby form a fastening for the plate.

Before this retaining material is poured about the plate a filling E is placed in each of the cores *d* around and below the mouths of the cavities *b*. This filling may be a thin piece of wood of the form shown in Fig. 5, or it may consist of clay or any other material which can be readily cut or dug out when desired. These fillings being in place and the plate seated, the retaining material is poured. The upper edge of the filling is preferably somewhat below the surface of the plate, so that it will be covered by a thin layer of the retaining material. When it is desired to remove the plate, this thin layer is chipped off and the filling is cut, split, or dug out. This will leave a space surrounding the connecting portions d^2 of the retaining material, and such space affords means for the introduction and operation of a small saw, whereby said portion can be quickly severed. The purpose of the slot or opening d' is to permit the saw a longer stroke in operation. When all the connecting portions d^2 have been severed in this manner, the plate can be readily pried or lifted out of the structure. The pockets *a* can then be prepared for a new plate, the retaining material in the said pockets being removed by chipping, drilling, or melting.

Instead of forming cores *d* in the body portion to seat the filling similar cores *g* may be formed in the plate, as shown in Fig. 6.

For the retaining material any suitable substance possessing the requisite relative low fusibility and sufficient hardness and toughness may be employed. I have found the ordinary commercial spelter to be a good substance for the purpose. For an ordinary frog or curve-cross two or three of the fastenings at each side of the plate will be sufficient. With a longer plate, as in mates, the number of fastenings should be increased proportionally.

It is obvious that various changes may be made in the details of construction without departing from the spirit and scope of my invention. Hence I do not wish to be limited to the precise construction and arrangement which I have herein shown and described.

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

1. In a railway-track structure, the combination of the body portion, the renewable portion or plate seated therein, and the retaining material having portions engaging pockets or cavities in the body portion and plate and securing the latter in place, and removable fillings adjacent to said pockets or cavities, and through which the retaining material extends.

2. In a railway-track structure, the combination of the body portion, the renewable portion or plate secured therein, the retaining material engaging pockets or cavities in said body portion and plate and having integral connecting portions, and removable filling material adjacent to said connecting portions, and which when removed provide open spaces at the sides thereof.

3. In a railway-track structure, the combination of the body portion, the plate, said body portion and plate having opposite pockets or cavities therein, retaining material filling said pockets or cavities, and a filling of wood or other soft material adjacent to the mouths of said pockets or cavities, and which when removed form spaces for the insertion of a saw or like tool, substantially as described.

4. In a railway-track structure, the combination of the body portion and the plate having oppositely-located pockets or cavities, and a space between the mouths of the same, a filling of soft material in said space having an opening in line with said mouths, and retaining material bedding the plate and filling said pockets, substantially as described.

5. In a railway-track structure, the combination of the body portion and the plate, said body portion and plate having the opposite pockets or cavities, the space between the same, and the slot or opening below the same, a removable filling in said space, and the retaining material filling said pockets or cavities.

6. In a railway-track structure, the combination with the body portion, and a renewable portion or plate seated therein, of bodies of retaining material seated partly in the plate and partly in the body portion and having an integral connection between said plate and body portion, and means whereby a saw may be inserted into the structure for the purpose of severing said connections.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE H. PARMELEE.

Witnesses:

LORETTO O'CONNELL,

H. W. SMITH.