

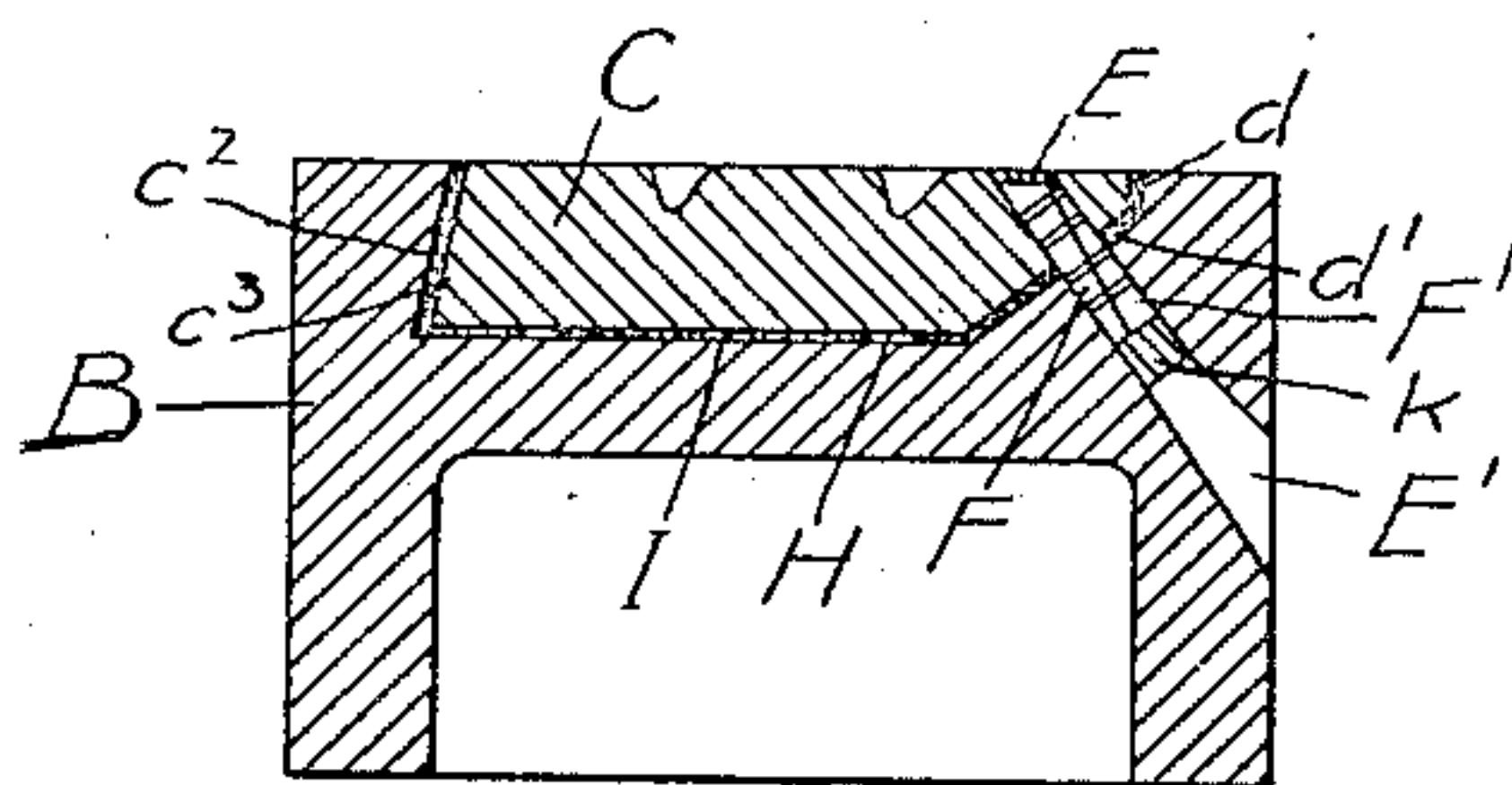
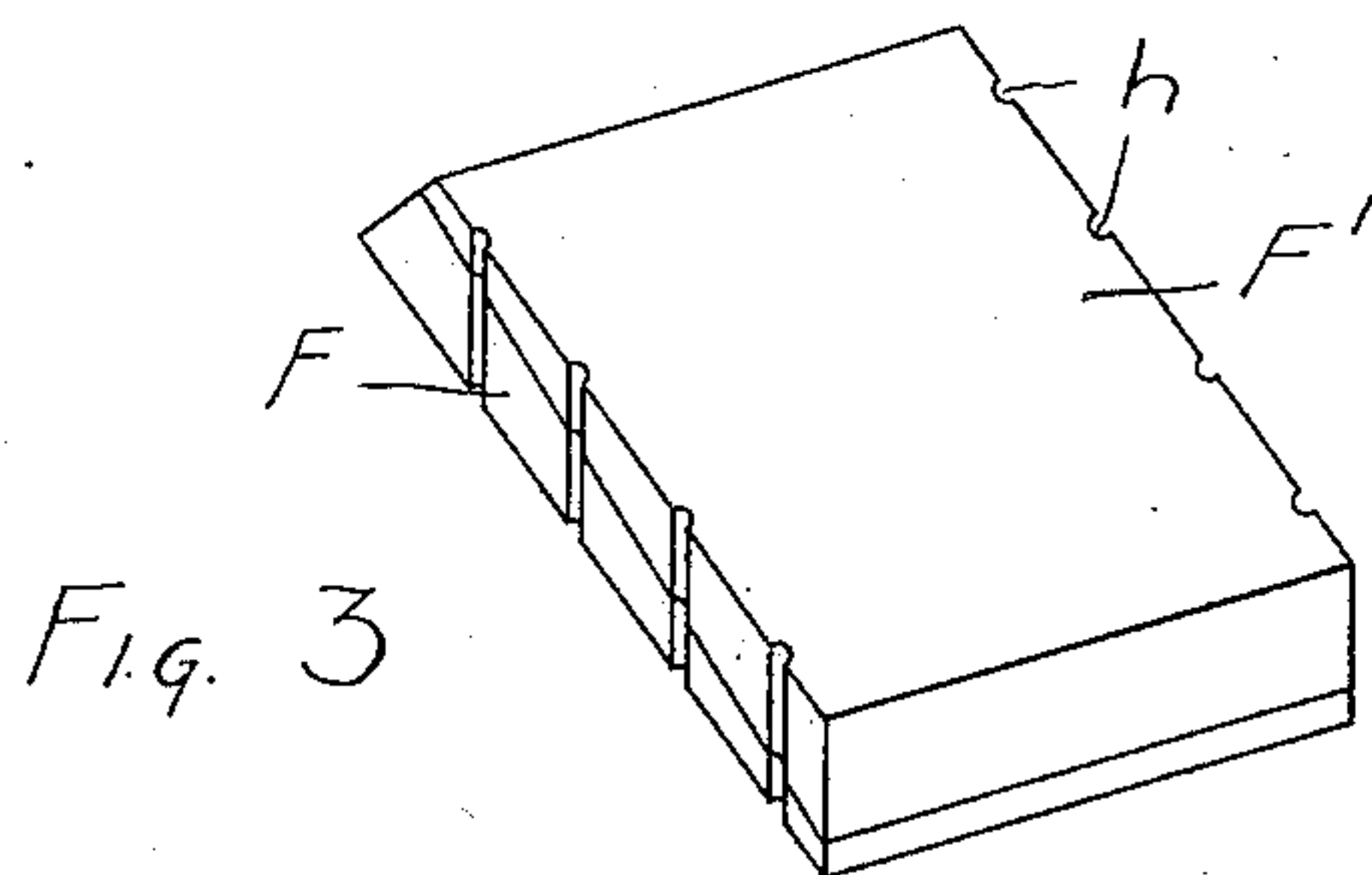
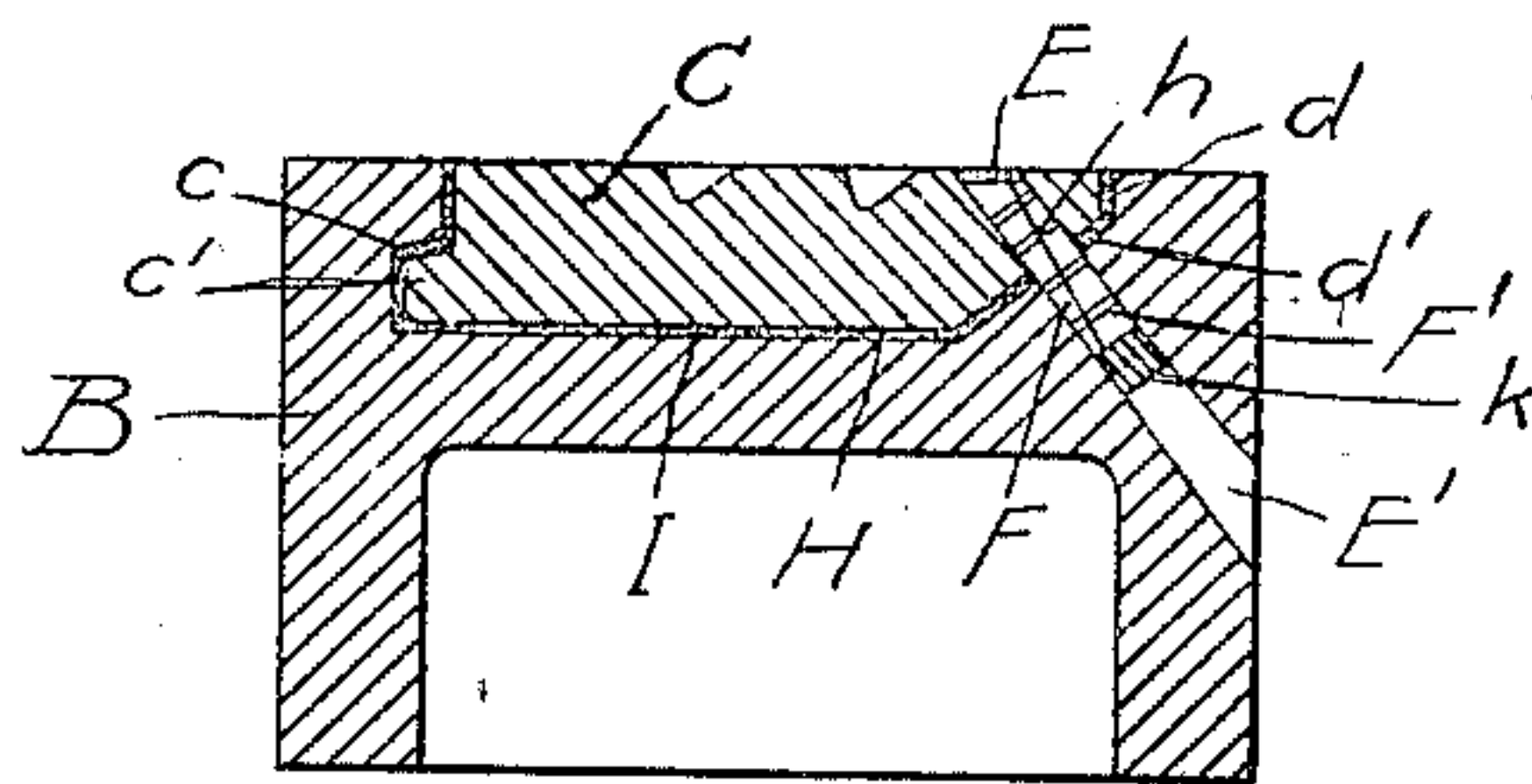
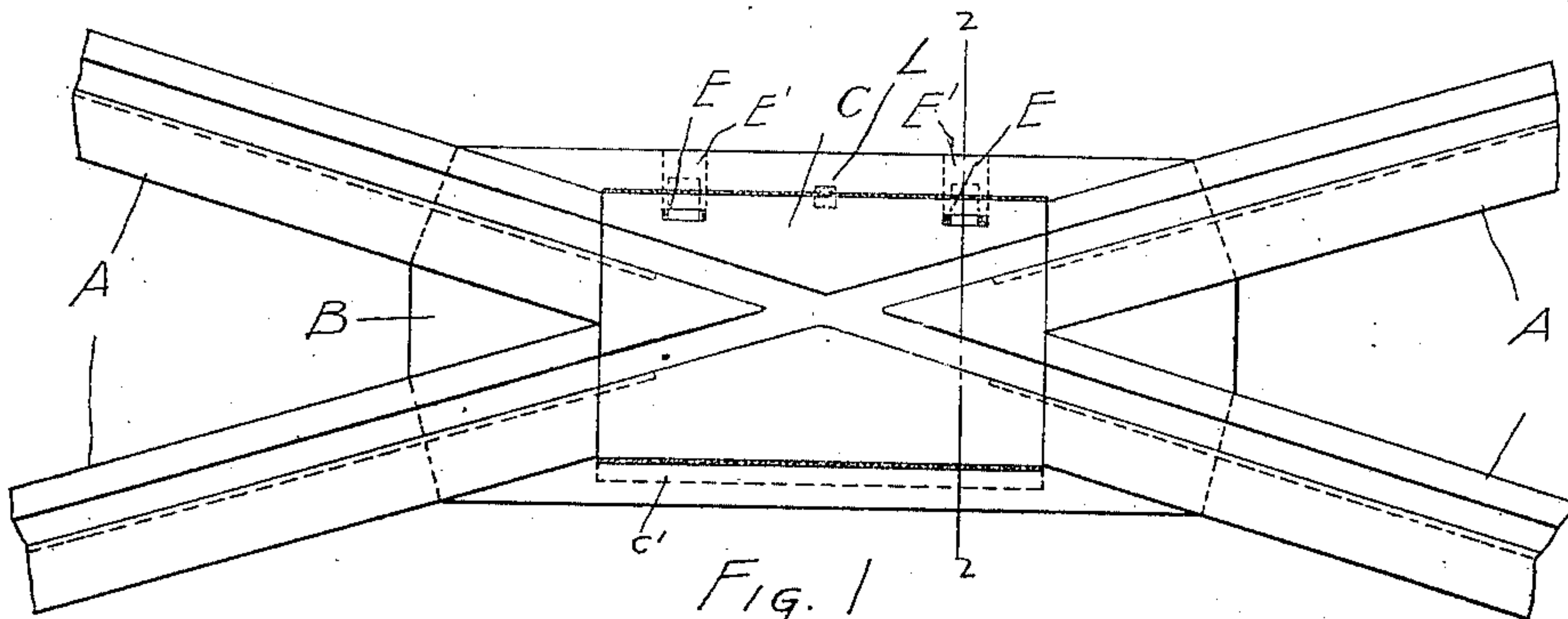
No. 729,061.

PATENTED MAY 26, 1903.

A. L. GEORGE.
RAILWAY TRACK STRUCTURE.

APPLICATION FILED MAR. 5, 1903.

NO MODEL.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ARTHUR L. GEORGE, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE LORAIN STEEL COMPANY, A CORPORATION OF PENNSYLVANIA.

RAILWAY-TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 729,061, dated May 26, 1903.

Application filed March 5, 1903. Serial No. 146,427. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR L. GEORGE, 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 railway-track structures of that class in which those portions of the structures subject to the severest wear in service are formed by renewable plates or blocks of a more durable nature than the material of the rest of the structure, removably secured in a pocket or seat of the structure, and is designed to provide a novel form of plate and fastening therefor, whereby the plate may be readily removed and replaced without disturbing the structure as a whole and without removing any portion of the adjacent pavement.

A further object is to so construct the plate and its seat that the number of fastenings required to secure the plate in place is materially reduced.

With these objects in view my invention consists in the novel construction, combination, and arrangement of parts, all as hereinafter described, and pointed out in the appended claims, 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 perspective view of one of the divided or compound fastening-keys, and Fig. 4 a transverse vertical section showing a modified form of construction.

The letter A designates the diverging rail members of the structure, connected together by a central body portion B, in which is formed a pocket or cavity to seat the track-surfaced wear-plate C. This pocket or cavity is formed at one side with the undercut recess *c* to receive the lateral flange or lip *c'* at the bottom of the plate. The other lateral wall of the pocket is formed with the short vertical portion *d* and the inclined portion *d'*, and the corresponding edge of the plate is of similar shape. Cored through this por-

tion of the plate are oblique openings E, whose upper ends terminate at the surface of the plate and whose lower ends open through the inclined portion thereof. Cored through the inclined portion *d'* of the wall of the pocket are corresponding and registering openings E', which may or may not extend entirely through to the side of the structure.

F F' designate compound or divided keys or fastenings, consisting each of two oppositely-acting wedges, whose wedging-faces are seated and driven against each other.

The plate C is seated in the pocket or cavity and is properly leveled up by means of thin shims H, placed thereunder. One of the keys F F' is then placed in each of the openings E, extending through into the registering opening E'. The member F of the key is then driven tightly to wedge the key in place. The usual filling and bedding I of spelter or similar material, is then poured at the sides and underneath the plate. The width of the keys is preferably made less than the width of the openings E E to leave spaces for the spelter at the sides of the keys. The latter are preferably formed with grooves *h* for better engagement with the spelter, and thus prevent them from jarring loose. To prevent the spelter from filling the openings E below the keys, a block *k* of wood or other suitable material may be placed in each of the said openings. To remove the plate, the spelter above the keys may be removed by chipping. A suitable drift is then placed on the member F' of the key, and said member is driven through into the opening E' sufficiently to release the key. The plate can then be readily pried from its seat. To facilitate this, a recess L may be formed in the edge of the plate to receive the point of a pry-bar, the recess being filled with clay or other easily-removable material when the spelter is poured in place. The openings *e'* are preferably made larger toward their lower ends to afford sufficient clearance to permit the key members F' to be readily driven to release the keys.

It will be noted that by reason of the shape of the plate and its pocket it is necessary to provide keys at one side only instead of at both sides, as is usual.

In Fig. 4 is shown a modified construction

in which instead of the undercut recess c receiving a flange c' of the plate the wall of the plate-seating pocket is formed with a beveled undercut c^2 and the edge of the plate is given a corresponding bevel c^3 . The construction is otherwise the same as that first described.

While I have illustrated the invention as applied to a frog or curve-cross, it is obvious that it may also be used in mates, switches, right-angled crossings, and other track structures in which a plate is to be removably secured in a pocket or cavity of the structure.

I do not herein make any claim to the divided key or fastening except in combination with other features of the structure, as I believe such key to be the invention of George M. Ervin, of Johnstown, Pennsylvania, as described and claimed in his application for patent, Serial No. 124,572, filed September 23, 1902, and, in fact, I do not wish to limit myself to the use of this particular key, as any other key which can be released by driving it or a member thereof through into an opening, such as the opening E' , is within the scope of my invention.

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 with the body portion having a pocket formed with an undercut lateral wall, of a plate having one edge portion shaped to fit approximately the said wall, and fastening members or keys driven obliquely through the opposite lateral portion of said plate into the said body portion and arranged to be released by further driving thereof.

2. In a railway-track structure, the combi-

nation with a body portion having a plate-seating pocket or cavity therein, formed at one side with an undercut wall, and at the opposite side with an undercut plate-seating surface, of a plate shaped at one edge portion to fit approximately the said undercut wall, and at the other edge portion to fit said inclined surface, oblique key-seats extending through said inclined surfaces into the body portion of the structure, and keys driven into said seats, and arranged to be driven through into said body portion to release their holding action on the plate.

3. In a railway-track structure, the combination with the body portion having a plate-seating pocket therein formed at one side with an undercut wall, of a track-surfaced wear-plate seated in said pocket and shaped to engage said wall, said plate having key-seats formed obliquely through its opposite side portion, registering seats formed in said body portion, keys driven in said seats and having members which can be driven to release their holding action, and means for normally holding said keys from working loose.

4. In a railway-track structure, the combination with the body portion and with the plate seated therein and having an undercut engagement therewith at one side of the divided wedging-keys driven obliquely through the opposite side portion of said plate into the body portion, and arranged to be released by driving one member thereof.

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

ARTHUR L. GEORGE.

Witnesses:

LORETTO M. O'CONNELL,
H. W. SMITH.