No. 765,663. PATENTED JULY 26, 1904.

G. M. ERVIN.

PLATE FASTENING FOR RAILWAY TRACK STRUCTURES.

APPLICATION FILED OCT. 22, 1903.

NO MODEL.

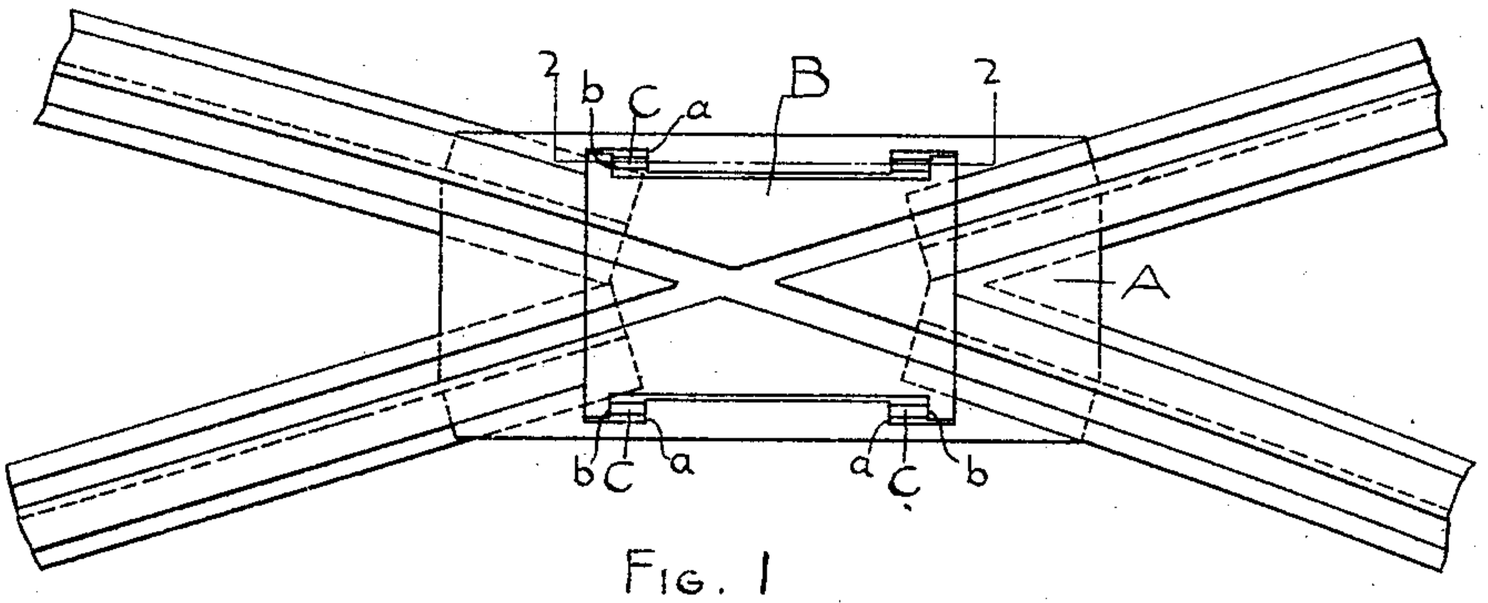

FIG. 1

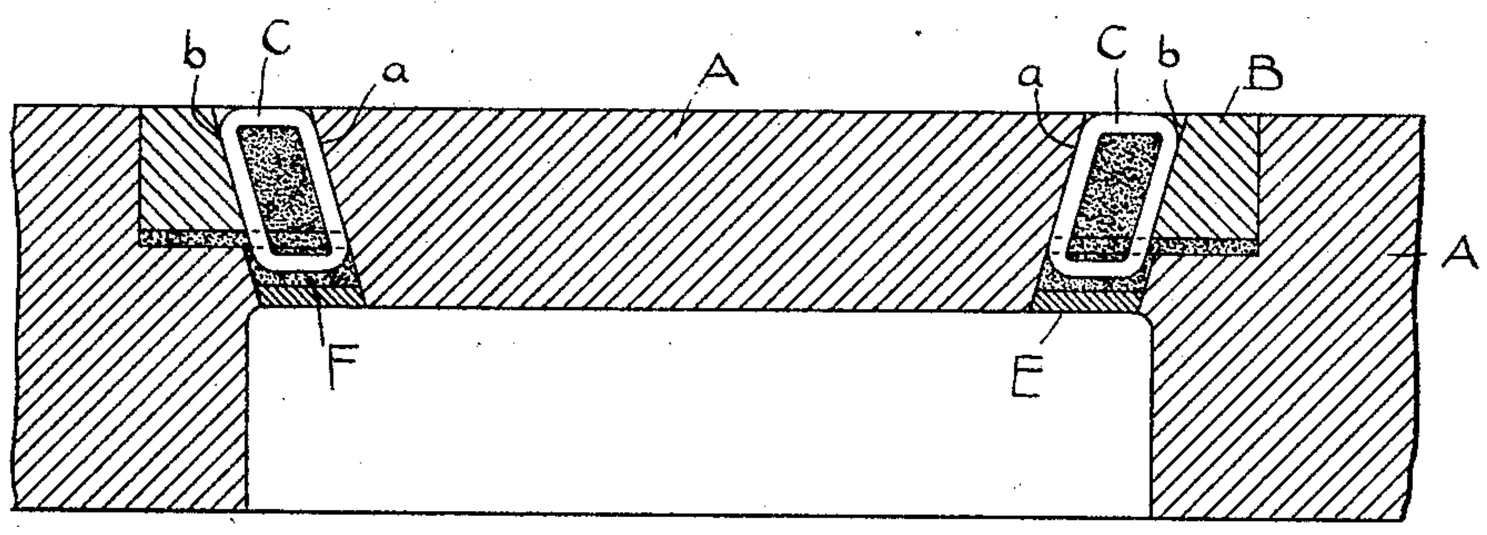

FIG. 2

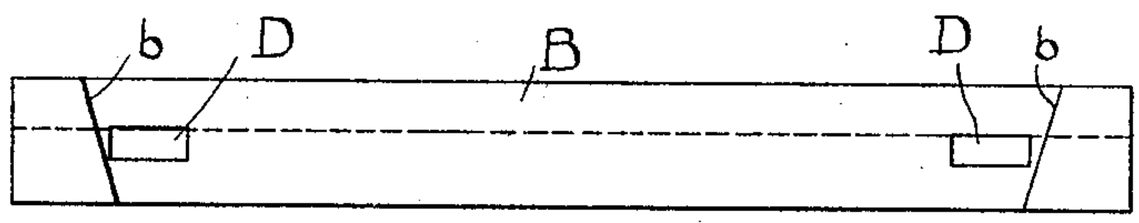

FIG. 3

FIG. 4

WITNESSES:
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No. 765,663. Patented July 26, 1904.

UNITED STATES PATENT OFFICE.

GEORGE M. ERVIN, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE LORAIN STEEL COMPANY, A CORPORATION OF PENNSYLVANIA.

PLATE-FASTENING FOR RAILWAY-TRACK STRUCTURES.

SPECIFICATION forming part of Letters Patent No. 765,663, dated July 26, 1904.

Application filed October 22, 1903. Serial No. 178,034. (No model.)

To all whom it may concern:

Be it known that I, GEORGE M. ERVIN, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Plate-Fastenings for 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.

My invention has relation to certain new and useful improvements in plate-fastenings for railway-track structures of the character described and claimed in my Patent No. 729,049, of May 26, 1903, which can be released by driving from the surface of the structure.

The present invention is designed to provide a novel form of spring-key which when driven to its seat will act as a wedge to hold the plate to its seat and which can be adjusted to compensate for variations in the parts and which is of such character as to insure itself a good bearing.

With these objects in view my invention consists in a hollow link-shaped key formed of spring material and so shaped that when driven between substantially parallel bearing-walls it will be compressed, and thereby bind the parts together.

My invention also consists in the novel construction and combination of parts, all substantially as hereinafter described, and pointed out in the appended claims, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view of a curve-cross embodying my invention; Fig. 2, an enlarged section on the line 2 2 of Fig. 1; Fig. 3, a side view of the plate removed, and Fig. 4 a detail perspective view of one of the keys removed.

The letter A designates the body portion of the structure, having seated therein the removable track-surfaced wear-plate B. This plate is formed with the inclined key-seats *b*, which are opposite to and substantially parallel with the undercut key-bearings *a* of the body portion of the structure, as in my patent above referred to.

C designates the keys of rhomboidal link form. These keys are made of material possessing spring properties, such as wrought iron or steel. Initially their two sides *c c'* are somewhat out of parallel, being swelled outwardly to a greater or less extent, as indicated in Fig. 4, so that when driven between the parallel bearing-surfaces *a* and *b* they are somewhat compressed, as shown in Fig. 2. Owing to variations in the castings, the space between the surfaces *a* and *b* ordinarily varies somewhat. If the key as initially made proves too small to fit the space, its width can be increased by standing it upon one of its corners c^2 and hammering upon the diagonally opposite corner c^3 for the purpose of spreading it. On the other hand, if it be too wide it can be laid upon one of its flat sides and hammered down slightly.

After the keys are driven to their seats melted spelter F or other like material is poured underneath and about the plate in the usual manner, and this material flows through the keys, filling their interior spaces and also the spaces at the sides thereof, whereby they are securely bedded and held from jarring loose.

D indicates recesses in the edges of the plate, which are filled with plugs of clay or like material to prevent their becoming filled with spelter and which form means for the engagement with the plate of prying or lifting devices when the plate is to be removed.

To release the plate, suitable drifts are applied to the upper ends of the keys, and they are driven down and out through the openings E in the floor portion of the structure. The pry-bars or lifting devices are then applied.

The invention is applicable to various kinds of track structures wherever substantially parallel bearing-surfaces may be formed between the plate and the body portion of the structure for the keys.

I do not claim herein, broadly, a hollow spring-key as a plate-fastening, as such a device is claimed in my pending application, Serial No. 148,336, filed March 18, 1903. I do not, however, wish to be limited herein to

the exact form and arrangement of key shown, as changes may be made in the details thereof without departing from the spirit and scope of my invention.

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

1. The herein-described plate-fastening or key for railway-track structures, consisting of a hollow, rhomboidal body of spring material.

2. The herein-described plate-fastening for railway-track structures, consisting of a hollow rhomboidal-shaped key, formed of yielding or springy material, and open from side to side.

3. The herein-described plate-fastening for railway-track structures, consisting of a hollow spring-key, united at its upper and lower portions and having its bearing portions initially curved outwardly.

4. In a railway-track structure, the combination with the body and plate portions having opposing and substantially parallel oblique key-bearing surfaces, of hollow rhomboidal keys of spring material driven and compressed between said surfaces, and openings in the body portion of the structure below said keys and through which they can be driven.

5. In a railway-track structure, the combination with the body and plate portions having opposing and substantially parallel key-bearing surfaces, of hollow rhomboidal spring-keys driven between said surfaces, and a retaining material surrounding and filling said keys.

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

GEO. M. ERVIN.

Witnesses:
LORETTO O'CONNELL,
H. W. SMITH.