No. 658,376. Patented Sept. 25, 1900.

C. F. KRESS, JR.

RAILWAY TRACK STRUCTURE.

(Application filed Mar. 19, 1900.)

(No Model.)

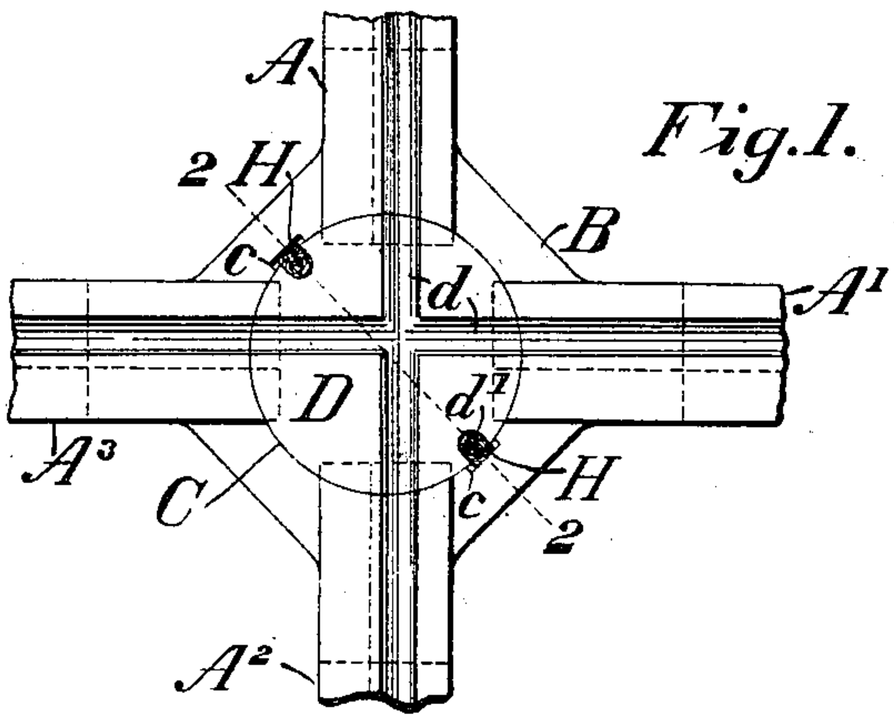

Fig. 1.

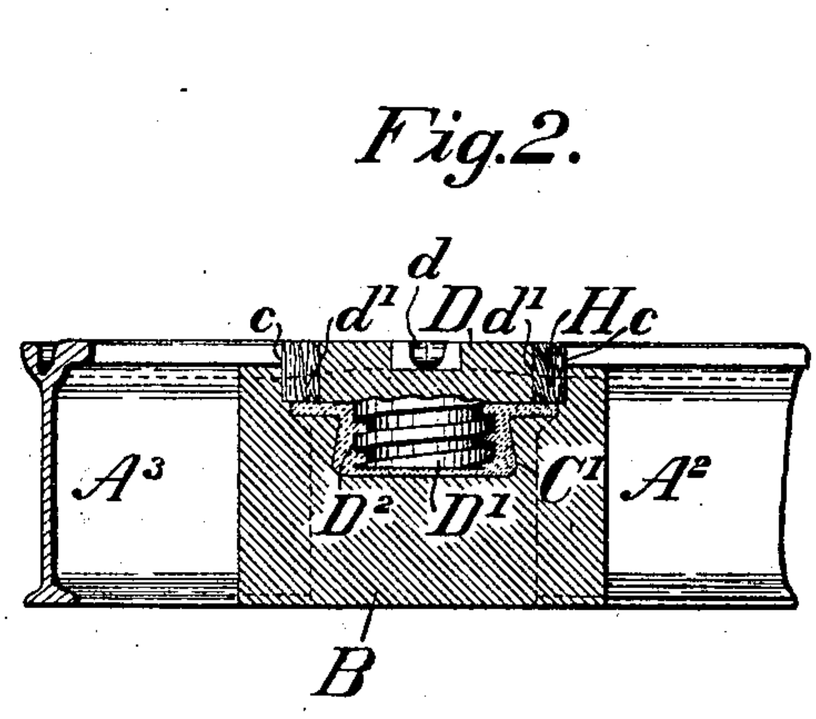

Fig. 2.

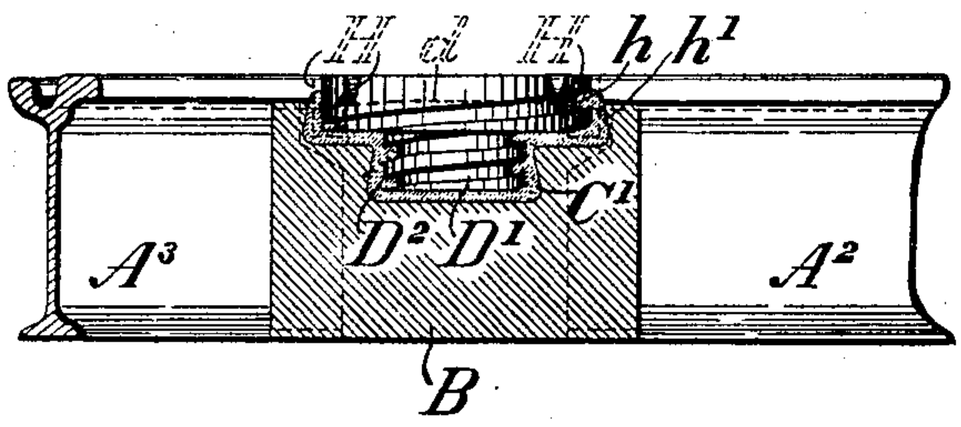

Fig. 3.

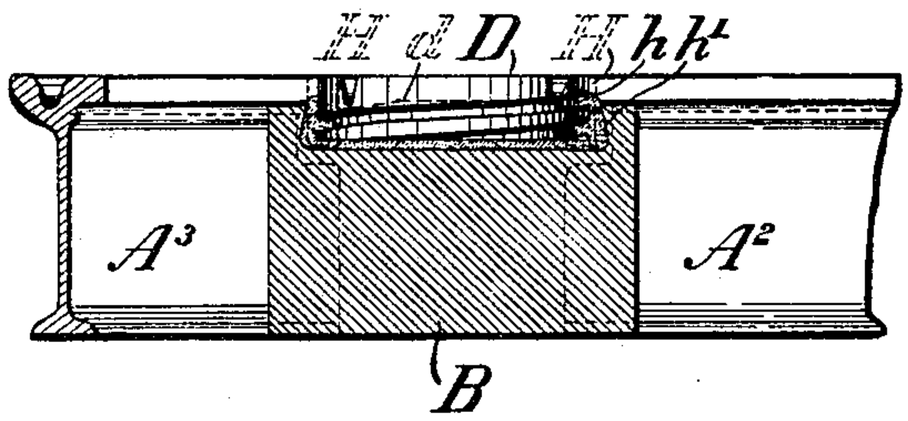

Fig. 4.

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RAILWAY-TRACK STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 658,376, dated September 25, 1900.

Application filed March 19, 1900. Serial No. 9,225. (No model.)

To all whom it may concern:

Be it known that I, CARL F. KRESS, Jr., 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.

My invention has relation to railway-track structures of that class which are provided with wear-plates of hard metal, which form the intersecting portions of the track, said plates being removably seated in the structure, so that they can, if necessary, be removed and replaced.

The object of my invention is to provide a structure of this class with a center or intersection plate of novel character seated and secured in such a manner as to very greatly facilitate its removal.

To this end my invention consists, broadly, in the combination, with a track structure having a circular pocket formed therein, of a plate of corresponding form seated in said pocket, and securing means for said plate which can be released by circular movement of the plate. By applying a suitable wrench or spanner bar to a plate of this character it can be readily turned to release it from its fastenings.

My invention also consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a portion of a railway-crossing embodying my invention. Fig. 2 is a sectional view of the same, taken on the line 2 2. Figs. 3 and 4 are similar views showing modified constructions.

The letters A, A′, A^2, and A^3 designate the four rail members of the structure, which are solidly united by a central body B of metal cast about their adjacent end portions, as usual heretofore in this class of work. Cored in the central portion of this central body B is a circular pocket C, portions of whose lateral walls are formed by the inner ends of the rail members, which have previous to the casting been milled to give them the proper curvature.

D designates the hardened-metal center or intersection plate, which is circular in form and which is made to fit neatly in the pocket C, its upper surface being formed with the flangeways *d*. To seat the plate neatly, the walls of the pocket can be trimmed or milled off after casting.

In the form shown in Figs. 2 and 3 the pocket C is formed with a deepened central portion C′, and the plate D is formed on its under side with a depending circular boss or projection D′, having a helical thread D^2. The portion C′ of the pocket is preferably of larger diameter at its bottom than at its top, and the boss or projection D^2 is of sufficiently-less diameter to leave a surrounding space, as shown. The plate is also provided with diametrically-opposite peripheral recesses *d*′, and the walls of the pocket are preferably provided with registering offset recesses *c*, although these may be omitted.

The plate is seated and secured in the following manner: It is placed in the pocket C, with its flangeways in proper alinement with respect to the gage-lines of the rail members. Melted spelter or some other soft retaining material is then poured into the pocket through the recesses *d*′ and flows underneath the plate and down around the boss or projection D′, portions thereof entering the groove or grooves of the helical thread. The recesses *d*′ are subsequently filled by means of wooden plugs H. It will be readily seen that when the spelter or similar material hardens in and about the thread D^2 it will securely hold the plate in position. If it is desired to remove the plate at any time, the plugs H can be readily chipped or bored out, and by means of a suitable bar, fitted with lugs similar to the lugs or jaws of a span-wrench for engagement with the recesses *d*′, sufficient power can be applied to the plate to rotate it and unseat it. The spelter can then be chipped out of the pocket to prepare it to receive a new plate.

The construction shown in Fig. 3 is similar to that shown in Fig. 2; but the upper or tread portion of the plate is also formed with a peripheral helical groove *h* to receive the

spelter, and the wall of the pocket is undercut at h' for the same purpose.

In the modification shown in Fig. 4 the boss or projection D′ is omitted, as is also the deepened central portion of the pocket, and the peripheral groove h is alone provided to receive the spelter.

It is obvious that many other modifications may be made without departing from the spirit and scope of my invention. Hence I do not wish to be limited to the forms which I have herein shown and described. My invention is also applicable to track structures in which the rail members intersect at acute instead of at right angles, as in the structure shown in Fig. 1.

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

1. In a railway-track structure, the combination with the rail members and the central connecting-body having a circular pocket therein, of a hardened intersection or center plate of circular form seated in said pocket, and means for securing said plate whereby it can only be removed by circular movement thereof.

2. A railway-track structure having secured in its central or intersection portion a hardened-metal plate of circular form, and means whereby said plate can be rotated to release it from its fastenings.

3. The combination with a railway-track structure having a circular pocket therein, of a hardened plate rotatably seated in said pocket, and means for normally securing said plate against rotary movement.

4. A railway-track structure having a wear or intersection plate of hard metal rotatably seated therein, and means for securing said plate and for releasing the same by rotary movement thereof.

5. A railway-track structure consisting of a plurality of rail members, a cast-metal body uniting said members and having a circular pocket formed therein between the adjacent ends of said rail members, the latter having their said ends shaped to form portions of the wall of said pocket, and a hardened wear-plate seated and secured in said pocket together with means for securing said plate, whereby it can be released and removed only by circular movement thereof.

6. In a railway-track structure, the combination with the rail members and the connecting-body therefor having the circular pocket between the ends of said members, of a circular plate fitted in said pocket and formed with one or more helical grooves or threads and retaining material around the threaded or grooved portions of said plates and engaging the same.

7. A railway-track structure having a circular pocket formed therein, a circular wear or intersection plate rotatably fitting the said pocket, and having a helical groove or thread and means whereby retaining material may be introduced into said pocket to engage said groove or thread.

8. A railway-track structure having a circular pocket formed therein, a circular wear-plate rotatably fitting the said pocket, means engaging said plate within said pocket to secure the same, and means whereby power may be applied to said plate to release it from the securing means.

9. A railway-track structure having a circular pocket formed therein, a circular wear-plate rotatably fitting the said pocket, and having a helical groove or thread thereon, and soft retaining material in said pocket engaging said groove or thread, said plate having means whereby power may be applied thereto to rotate it from engagement with the said material.

10. A railway-track structure having a circular pocket formed therein and deepened at its center portion, a hardened wear-plate rotatably fitted in said pocket and having a depending boss or projection extending into the deepened portion of the pocket and having a peripheral thread, and retaining material surrounding said boss or projection and engaging the said thread.

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

CARL F. KRESS, JR.

Witnesses:

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JOHN H. KENNEDY.